

AMERICAN GAS ASSOCIATION



OCTOBER
1960

V
4
2
1
0

O
C
T
O
B
E
R

XU

Only **1** refrigerator-freezer
 —the new No-Frost RCA WHIRLPOOL
 gives so many modern automatic features
and saves money because it's Gas!



SAVES TIME! EXCLUSIVE ICEMAGIC®
 replaces every cube you use, automatically!
 NO TRAYS to empty or fill. A steady supply
 of ice drops into the server; all you do is use
 it! Only an RCA WHIRLPOOL refrigerator
 has this ice-maker, proved by years of con-
 sumer use.



NOW! NO FROST—EVEN IN THE FREEZER!
 There's no frost to de-frost in this zero-degree
 freezer. Yet you can freeze foods right at
 home—hold over 92 lbs. of frozen foods.
 The right temperature is sealed in by Million-
 Magnet® doors, with special magnets in
 door gaskets.



SAVES TIME! EXCLUSIVE JET-COLD SHELF
 chills a new way, with new speed! Tiny jets of
 arctic air inside the shelf let this special shelf
 chill food up to 3 times faster than an ordinary
 refrigerator shelf! Quick and safe for desserts,
 salads, any food or liquid. You only find it
 in an RCA WHIRLPOOL!



**SAVES FOOD! NEW JET-COLD
 MEAT CHEST!**

All new, all over! New space-saving lines
 —it fits *flush* to walls and cabinets on all sides.
 New easy-open doors. New design has more
 room inside. No coils stick out to spoil the lines
 —this handsome RCA WHIRLPOOL looks built-in,
 even when it isn't! Choose pink, yellow or white.

ONLY ONE NO-FROST REFRIGERATOR-FREEZER WITH A 10-YEAR GUARANTEE!

Saves you money, too! You get every
 advantage: built-in look; color choice; new
 food-keeping features; PLUS the fabulous refrig-
 erating system designed around a silent flame,
 with no moving parts to break down. You get a
 10-year written guarantee on the sealed refrigerating
 system—twice as long as usual. Gas
 saves you money on fuel bills,
 too. So choose Gas. There simply
 isn't a better buy than a mod-

ern, automatic, Gas refrigerator-freezer like
 this!
 AMERICAN GAS ASSOCIATION.



Use of trademarks and RCA by Whirlpool Corporation,
 St. Joseph, Michigan, manufacturers of RCA WHIRLPOOL
 appliances, authorized by Radio Corporation of America.
 *Trademark

ONLY GAS **does so much more...
 for so much less!**

*This advertisement appeared in "American Home," July 1960; "Ladies' Home Journal," July; "McCall's,"
 July; "Saturday Evening Post," July 23; "Good Housekeeping," October; and "Sunset," July and August



First it was Gaslites, now it is Gasigns, putting gas on the U.S. map in a blaze of glory—see p. 8

It may seem strange to some that this month's most important event—the A. G. A. Convention—is not mentioned in the table of contents opposite this column. . . . Well, there is an explanation. . . . it's all a matter of logistics. . . . You see, the October issue, being distributed in the middle of the month, appears too late to carry profitably further advance stories on the Convention; these were pretty well wrapped up in the September issue. . . . On the other hand, since the MONTHLY goes to press before the Convention dates, October 10-12, it isn't possible to cover Convention events in time to report them in the October issue; these stories will be wrapped up in the November issue. . . . Perhaps it behooves us to answer another often-asked question. . . . Why does the MONTHLY appear in the middle of the month, instead of on or before the first, like other magazines? . . . Again, a matter of logistics. . . . Unlike most other magazines, the MONTHLY is a combined feature and news publication. . . . It takes about 20 days following new copy deadline to get the magazine made up and printed. . . . Therefore, mailing before the first of the month would mean that very little of September's news, say, would get printed in the October issue. Printing September news in the November issue, it seems to us, would be worse than publishing, as we now do, a middle-of-the-MONTHLY.

JAMES M. BEALL
DIRECTOR, PUBLIC INFORMATION

BERNARD KAAPCKE
EDITOR

RICHARD F. MULLIGAN
ART SUPERVISOR

SHARON HURLEY
NEWS EDITOR

EDITORIAL OFFICES:
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N.Y.

CONTENTS FOR OCTOBER 1960

FEATURES

NEW CAMPAIGN BOOK IS ACTION CALENDAR	2
YOUR GAS COMPANY PRESENTS 'BARBARA STANWYCK SHOW'	4
'SAFE SIXTIES' IS INDUSTRY AIM	6
GASIGNS	8
LIONS LOSE OUT, CHICAGOANS CAUGHT BY GAS DISPLAYS	11
FILM SHOWS TAMING OF A FLAME	13
GAS INDUSTRY ACCIDENTS CONTINUE DOWN TREND	14
HOME MAGAZINE 'COVERS' GAS KITCHEN	15
U.S. TEAM FARES WELL IN 'COOKING OLYMPICS'	16
AN OPEN LETTER TO APPRAISERS—by Perry Prentice	19

SECTIONS

INTERNAL AUDITING AND E.D.P. (Accounting)	21
GAS 'CLIMATE CONTROLS' A GIANT PLANT (Industrial and Commercial)	23
SYMPOSIUM DRAWS TEXTILE LEADERS (Industrial and Commercial)	25
TRANSMISSION ROUNDTABLE A 'FIRST' (Operating)	27

DEPARTMENTS

INDUSTRIAL RELATIONS ROUNDTABLE	10
FACTS AND FIGURES	12
MEET YOUR ASSOCIATION STAFF (Robert B. Smith)	18
INDUSTRY NEWS	32
HIGHLIGHTS OF CASES BEFORE FPC	34
PERSONAL AND OTHERWISE	37
OBITUARY	39
CONVENTION CALENDAR	40
PERSONNEL SERVICE	40

INDEXED BY APPLIED SCIENCE AND TECHNOLOGY INDEX

VOL. 42

NO. 10

• The "American Gas Association Monthly" is published 11 times a year, monthly, except in July and August, when there is a bimonthly issue, by American Gas Association, Inc., 420 Lexington Avenue, New York 17, N. Y. The publication office is located at 73 Main Street, Brattleboro, Vt. Address communications to 420 Lexington Avenue, New York 17, N. Y., including manuscript copy for publication. The Association is not responsible for statements and opinions contained in papers and discussions appearing herein. Cable addresses: American Gas Association, "Amerigas, New York"; American Gas Association Laboratories, "Amerigaslab, Cleveland." Annual subscription: \$5 domestic (United States and Canada) and \$6 foreign. Second class mail privileges authorized at Brattleboro, Vt.

POSTMASTER: Send Form 3579 to American Gas Association
420 Lexington Ave., New York 17, New York.



this is the year to live modern...for less...with GAS



January

January is a Gas Dry Month

February

February is a Gas Water Heating Month

March is a Gas House Heating Month

April is a Month for Gold Star Gas Range Campaigns

May is a Gas Air Conditioning Month

GAS RANG
mean cleaner,
smokeless bro

GAS
gives you
king-size hot water



10 WAYS
MAKE MORE MONEY
and
MAKE YOUR
MONEY
WORK MORE!



GAS dries clothes
whiter, brighter, faster
for less!

BUILT-IN GAS RANGE
GOLD STAR

June is a Gas...
July is a Gas...
August is a Gas...

Fair and Cost
WHEN YOU HEAT YOUR
HOUSE WITH GAS

for carefree comfort...

HEAT with **GAS**

clean
automatic
dependable

10
SHORT
CUTS

10 Points to
Modern Laundry
Planning

Automatic Gas Incinerator

only
GAS
ranges

feature "burner-with-a-brain"

10 ways to take a
**YEAR-ROUND
VACATION**

GAS All-Year AIR CONDITIONING

10

June

June is a
Gas Light
Month



live modern...for less...with GAS

New campaign book is action calendar

Each month in 1961 will be "M-month" for a different gas appliance, under bold new sales promotion campaign plans heralded in a comprehensive Campaign Calendar mailed to member gas companies and manufacturers in September.

The Campaign Calendar, revising previous format of the annual A. G. A. Promotion Plan Book, represents a novel concept designed to outline gas industry promotions not only month-by-month, but day-by-day, for the year ahead.

The new arrangement accomplishes several important objectives. First, it provides a daily reminder to keep executives and promotion men up-to-the-minute at a glance on national promotion and advertising activities. Second, it gathers together on one calendar page according to time of use the pertinent information on each campaign; shown are promotion materials available, other sales aids obtainable, television and print advertising scheduled, and dates of special events. Third, it enables companies and dealers more easily to plan local tie-in activities in detail with assurance of perfect timing.

Supplementing the Campaign Calendar will be special mailings of "Campaign Calendar Bulletins" further spelling out facts on promotion plans and materials.

To facilitate the new approach to gas promotion planning, each month has been designated target month for a different gas appliance or campaign, as follows:

January—Gas Dryers.

February—Gas Water Heaters.

March—Gas House Heating.

April—Gold Star Gas Ranges.

May—Gas Air Conditioning.

June—Gas Lights.

July—Gas Refrigerators.

August—Gas Incinerators.

September—Gold Star Gas Ranges.

October—Blue Star Homes . . . New Freedom Kitchens and Laundries . . . and Industrial & Commercial Gas.

(Continued on page 26)



Big-name stars lend promotable glamor to gas industry's own half-work drama

YOUR GAS COMPANY *presents—*

Barbara Stanwyck Show

NBC-TV



LIVE MODERN...FOR LESS WITH GAS

On September 19, a famous personality went to work for gas—Barbara Stanwyck.

Miss Stanwyck, one of Hollywood's all-time box-office favorites, and one of the movies' most versatile performers, on that date bowed as hostess of the gas industry's new network television showcase, the *Barbara Stanwyck Show*.

Besides introducing each play in the new drama series, Miss Stanwyck stars in 11 of the first 13 shows scheduled for gas industry major sponsorship, and will continue to star in the plays to come.

The *Barbara Stanwyck Show* appears every Monday night at 10-10:30 p.m. Eastern Time, over the NBC-TV network. Under major-minor sponsorship, the gas industry, through A. G. A. sponsors the show every other week, with an

exchange commercial on alternate weeks during the co-sponsor's show.

On major weeks, this arrangement in effect accomplishes the National Gas Industry Television Committee's original objective of providing the gas industry with its own national TV program.

This represents a change from shared sponsorship on the otherwise outstandingly successful *Playhouse 90*, principal vehicle for gas TV commercials for the past three years.

Other advantages are expected to be reaped from the new show:

The time segment is ideal for maximum national viewership, with the show going on the air across the nation at times from 7 p.m. to 10 p.m., depending on zone.

The Monday evening spot likewise is regarded as ideal from the standpoint of local promotional tie-ins, allowing utilities and dealers to take advantage of the full week following the program for local merchandising activities.

The changes to a new program, at a new time, on a new network, all mean that the gas commercials will now reach a vast audience of new viewers. Nevertheless, it is expected that the new dramatic series will attract enough former viewers of *Playhouse 90* to achieve considerable reinforcement of previous gas TV messages.

The Television Committee's chairman, Robert W. Ramsdell, reports that member response to the new show was so enthusiastic that the entire program for the 1960-1961 season was fully fi-

nanced at the gas industry's expense.

In co-series, Stanwyck's show is a motable series.

Beginning who appears in the show, names like Mason, Guy Ma, Duff, St, Ida Lupi.

Other schedule

work dramatic series providing new national showcase for Julia Meade gas commercials



Ralph Bellamy, Hume Cronyn, Charles Bickford and Lloyd Nolan are among performers to appear with Barbara Stanwyck on early-scheduled fall shows



nanced through voluntary subscriptions at the earliest date in the history of gas industry television. Ninety-six local stations will carry the show, blanketing areas served by participating companies.

In contrast to most other TV play series, emphasis of the *Barbara Stanwyck Show* will be on the top, promotable stars who will appear with Miss Stanwyck in the plays.

Beginning with Stephen McNally, who appeared in the opening play, "The Mink Coat," such audience-building names will be featured as those of James Mason, Walter Pidgeon, Myrna Loy, Guy Madison, Walter Brennan, Howard Duff, Sterling Hayden, Celeste Holm, Ida Lupino, and Julie London.

Other top stars who appear in shows scheduled for the immediate future are:

Hume Cronyn, in "Good Citizen," October 3.

Lloyd Nolan, in "The Seventh Miracle," Oct. 17.

Ralph Bellamy, in "The Odyssey of Tadpole Chan," Nov. 14.

Charles Bickford, in "Ironbark's Bride," Nov. 28.

Barbara Stanwyck also appears in each of these shows, and will in addition star in "The Key to the Killer," on October 31.

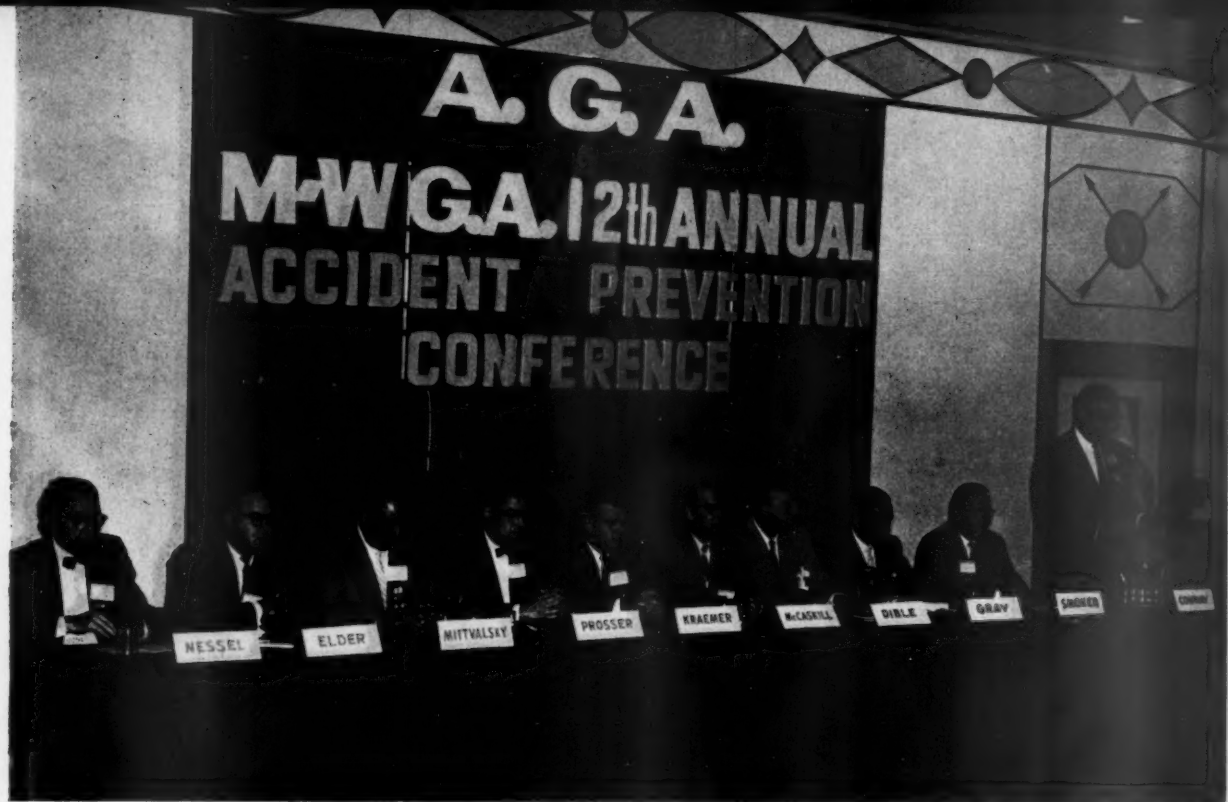
Commercials to be shown on the shows feature Julia Meade. Most will be from a brand-new series currently going into production. Many of the commercials again will be made available for local use to subscribing members.

Strong support will be given in the

advertising to gas heating, Gold Star ranges, gas refrigerators, gas water heaters, gas clothes dryers, and other uses of gas. Institutional ads also are scheduled.

Promotion materials being made available for local support of the show include full-color window posters, postage meter slugs, newspaper ad mats, on-the-air announcements distributed to local stations by NBC, and promotion stills supplied by A. G. A.'s Hollywood Bureau.

Participating companies are urged to make maximum use of these materials, to contact local TV stations to request use of the announcements, and to contact local newspaper TV editors to request use of stills and casting information in program listings.



Panel of moderators reports on conclusions threshed out in workshop sessions covering all areas of safety

'Safe Sixties' is gas industry aim

The next decade may become the "Safe Sixties" for the gas industry, judging from record attendance at the 12th Annual Accident Prevention Conference in Minneapolis, Sept. 12-14.

Jointly sponsored by A. G. A. and the MidWest Gas Association, the meeting drew a larger number of delegates than any previous safety conference.

Significantly, more than half the audience was composed of operating and executive personnel. Most safety directors at the convention felt that growing participation by these representatives—the men who put safety programs into effect—is a major contribution to safety in the gas industry.

More than fifty delegates assembled at the pre-conference A. G. A. Accident Prevention Committee meeting Monday morning to hear subcommittee reports and view completed visual

aids produced during 1960. Spontaneous and enthusiastic response at this meeting set the pace for the two-day convention.

Following opening remarks and a welcome to the city on Tuesday morning, Marvin Travis, outgoing chairman of the safety committee, presented highlights of work accomplished in the two years he has served in this position.

Citing the "longest consecutive downward trend of any industry in accident reduction," Mr. Travis stated, "We are within range of bettering the electric industry record for accident prevention."

Pinpointing areas which require greatest attention, he told the audience "that the accident frequency rate for the industry as a whole is still too high." He called for vigilance in preventing the following types of acci-

dents: struck-by, high temperature contact, falls, and being caught in or between.

Training aids to help in conducting effective safety meetings were listed by Mr. Travis. These include the training films, safety flipcharts, and supervisory safety courses available to all companies on a regional basis through A. G. A.

Harold Walker, Jr., assistant to A. G. A.'s managing director, struck an optimistic note in the keynote address. Touching on the economic as well as humanitarian aspects of safety he said that the potential cost in wages only was \$74,900,000 for the past 12 years (1948 through 1959). The industry's actual wage only cost of disabling injuries was \$37,600,000. This has resulted in a savings of almost 50% or \$37,300,000.

Continuing with this thought he

added, "We could all work out interesting theoretical numbers of lives saved by looking at our very encouraging record in the reduction of fatalities."

Credit for much of the accident reduction was given to development of the Accident Prevention Committee. Recognizing the problems and working together did something about the unenviable position of the gas industry in the late forties, according to Mr. Walker.

Dissemination of information got problems out into the open and helped companies learn from each other, he added.

Turning to the future, Mr. Walker used information from the recent public relations survey to point out the need for a better safety record and a program which would counteract public acceptance of electricity as being safer than gas.

As Mr. Walker pointed out, "There is today no major trade association engaged in compiling or disseminating safety statistics on an entire industry."

Calling for continued effort he stated, "Having controlled or eliminated our problems, we can then tell our safety story authoritatively and factually with a wealth of data to back that story up. So, over a period of years we can show the public that if

and when an accident occurs, it falls into the act of God category.

"We are on the threshold of a future that will cause even the magnificent past to fade in comparison," he added, and asked safety people and those responsible to help provide the impetus that will insure a successful breakthrough into the fabulous future.

Proposals for competitive promotion of gas safety, greater dissemination of the positive trend of accident reduction and increasing safety efforts through industry-wide cooperation met with enthusiastic audience approval.

An opportunity to apply the idea exchange and intercompany cooperation was provided Tuesday afternoon in a series of workshops. Sessions included a wide range of discussions within seven major categories. These were:

Top Management Looks at Accident Prevention

AZA-Z16.1—Its Interpretation and Application

Motor Vehicle Safety

Safe Practices in Customer Service Operations

Safe Practices in Distribution Operations

Safe Practices in Transmission Operations

Communicating Effectively

An example of workshop activity is the report and recommendation compiled by the top management committee.

Recognizing the seven areas of safety organization and philosophy, the group agreed that three aspects interested them primarily. These were:

Management Leadership

Management Acceptance of Responsibility

Management Assignment of Responsibility

Striking hard at these special interest areas the group limited discussions generally to: How does management exercise its leadership and interest? What is good safety operation and who is responsible for safety? How to get participation of all departments? How can top management discharge its responsibility for public safety?

Although no panacea for these problems was developed during the workshop, it was agreed that management must support safety with adequate budgets. Selection of strong, dedicated, persuasive and outgoing safety people who are experts in the field is a must.

Spontaneous response in other workshops provided equally profitable sessions. Delegates presented problems which were paramount in their respective areas.

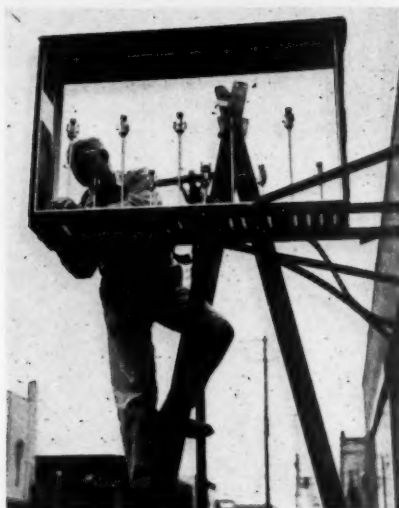
(Continued on page 18)



Herman Quist, Jr., demonstrated new safety coverall



P. E. Sheppard presented new NSC films and materials



"GASIGNS"

Arkla Air Conditioning Corporation's brilliant new gas-using idea is only one among dozens being spawned by energetic researchers

Three years ago Arkla Air Conditioning Corporation, a subsidiary of the Arkansas-Louisiana Gas Company, sprang full-blown into gas industry prominence when it acquired the air conditioning division of Servel, Inc., and immediately launched a production, sales and development program which already has made gas a fuel seriously to be reckoned with in the residential air conditioning field, and which has opened up cool green vistas in the formerly arid "summer valley" of gas utility revenues.

In 1958, Arkla suddenly touched off a nationwide revival of gas lighting when it introduced and promoted its new Arkla "Gaslite."

In the winter of 1959, Arkla completed development of the Arkla-Servel 25-ton water chiller-heater, the first

medium-tonnage absorption system ever to provide both heating and cooling. The step was hailed as a major breakthrough in commercial heating and air conditioning.

Now, Arkla has come up with another important new gas load-builder which bids fair to capture nationwide interest—its revolutionary "Gasign," a completely gas-operated illuminated sign for commercial establishments.

These new products, each a milestone of progress, are but four out of more than a score of new gas-burning products introduced to the market in the short three years' space by Arkla Air Conditioning Corporation's fertile research and development staff.

The Arkla "Gasign" is believed to be the first commercial gas-lighted sign

ever developed. The signs are now being marketed for operation on either natural or LP gas.

According to W. G. Wepfer, Arkla general sales manager, "the gas sign offers a brand new load building potential and an opportunity to enter a vast new market hitherto unavailable to gas. It has the potential of becoming as important as heating and air conditioning, cooking, water heating and the other major uses of gas."

The name "Gasign" follows the pattern set by use of the word "Gaslite" to designate Arkla's line of gas lights. "Though an outgrowth of our experience with gas light development," Mr. Wepfer said, "the gas-operated sign actually is an entirely new appliance."

Arkla's gas signs consist chiefly of



Amid some of his laboratory creations



Arkla draftsmen get every detail of



Engineers J. L. Kaposta and R. K. Spear test heater-chiller unit



W. E. Stephan and H. C. Pierce check a fan coil filter assembly



Research heads getting together are K. E. Smith, left; H. C. Pierce; Fred Bawel; Don Kuhlenschmidt; R. K. Eskew; Dr. Philip Anderson; A. K. Mieg; R. K. Spear; C. C. Lyon

two specially developed frosted glass side panels, for the user's advertising message, mounted on a metal frame, with a row of mantle-covered gas burners glowing inside. The panels are specially tempered for maximum strength (they will take the weight of a 200-pound man) and to withstand high heat and weather extremes. A translucent coat of white enamel glazed to the inner surface assures well-distributed illumination. The black steel frame is weather-proofed and has top venting.

Individualized messages can be imprinted locally, with the use of heat-resistant paints, or Arkla will arrange for the imprinting.

Each sign is shipped with all necessary attachments for both post and wall bracket mounting.

A new Arkla-designed self-contained photo-electric control which generates its own current by the use of thermocouples, thus requiring no electrical connection, is available as optional equipment. By simple redirection of photocells, the signs can be made to blink automatically.

"Gasigns" are being manufactured by Arkla in four different sizes. Two are oblong in shape, one is round, and one is square. The latter can be mounted in multiples vertically, horizontally, or even diagonally.

As a load builder, each "Gasign" is equivalent to the addition of approximately four average domestic customers, according to Mr. Wepfer.

"The 'Gasign' is one of the best new gas load-builders to come along in many years," says Mr. Wepfer. "Because it is

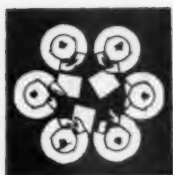
brand new and an entirely different concept in outdoor advertising—plus the fact that its initial cost is considerably lower than for comparable electric signs—the market for it is limitless."

Arkla's "Gasign" was a result of more than 18 months of development and field testing. During this time it was only one of many new products going through various stages of evolution.

Ever since formation of the Arkla Air Conditioning Corporation in 1957, new gas-fired product development—with particular stress on broadening the applications of absorption air conditioning—has been given number one priority by company management.

W. R. Stephens, president of Arkla, says, "Our main reason for existence is

(Continued on page 28)



Industrial relations round table

Prepared by
A. G. A. Personnel Committee

Edited by **W. T. Simmons**
Assistant Personnel Manager
Philadelphia Electric Co.

● **Do we meet job applicants halfway?**—R. C. Cross in the issue for August of *Modern Office Procedures* stated that too many firms interview job applicants as if it were entirely up to the applicant to sell himself to the company; no effort is made to sell the company to the applicant. No one knows how many able people are antagonized by this attitude, but the number is high. Mr. Cross says good employees are not so easily come by that they should be made to jump these commonly encountered hurdles:

Wholesale interviewing—When a job applicant is "assembly-lined" from one interviewer to another, his morale suffers, and chances are that someone, eventually, is going to find something wrong with him. A ton of approval won't balance off an ounce of disapproval.

Indifference—To the applicant, every interview is important. Treat him with courtesy and respect; don't offend him with a bored, perfunctory attitude.

Delays—Keeping an applicant on the string, whether it is for a half hour in the waiting room or through two weeks of company indecision, means that the company image will shrink in his eyes.

● **Certain sickness benefits are wages under Social Security Bureau's ruling**—The Social Security Administration holds that sickness benefits paid to an employee at the discretion of the employer are wages for six months following the month in which the individual last performed services.

The situation before the administration involved an employee who was given his regular salary for a period of more than a year after he became ill and rendered neither physical nor advisory services to the employer and then was retired. Continuation of his salary was at the discretion of the company's board of directors.

The act contains two sections relating to exclusion of disability benefits from the definition of wages. Section 209(b) excludes payments under a plan or system established by an employer. Section 209(d) makes no mention of a plan or system but excludes payments after the expiration of six calendar months following the last calendar month in which the employee worked for such employer.

Thus, the employee who receives payments under a formal plan does not receive wage credits for social security purposes for as long a period as a beneficiary outside a formal plan. The administration sums up its ruling as follows:

"Where payments are made to an employee for sickness disability at the discretion of the board of directors of a company which has no plan or system for paying sickness disability benefits to its employees and where the employee performs no services for the company from the onset of his sickness until his retirement, held, only such payments made within the six-month period following the month in which he last worked for the company are wages for social security purposes."

● **The pickpocket of productivity**—"Procrastination is not only the thief of time—it is the pickpocket of productivity and the saboteur of self-respect. It nags at us and spoils our satisfaction. It deprives us of the fullest realization of our ambitions and hopes." These sentences were observed in the *Monthly Letter*, Volume 40, Number 9, of the Royal Bank of Canada. It goes on to say that in business, a man who hesitates is lost. He who seeks to bring mature judgment and deliberation to the solution of his problems must be able to impose on himself deadlines for decision-making.

The man habitually behind in his work is habitually behind in success. Putting things off is not only a blight on his own life, but also a nuisance to others. Everyone around him must work a little harder to take up the slack he leaves.

Breaking the procrastination habit is not an easy task; there is no simple formula that can be applied. One good way to attack the problem is to sit down and make a list of what you want to accomplish today, this week, this month. Now, what real obstacles stand in the way? The only obstacles are the holes in your time-and-energy schedule. Plug them up, and procrastination will never again be a problem.

● **Arbitration decision**—Vacation pay refused worker off 150 weeks—A disabled employee of Armstrong Cork Company's plant in Jackson, Miss., is being paid weekly workmen's compensation but has not been on the company payroll for 150 weeks (since February 7, 1957). He has been denied a claim for a 1959 vacation benefit in an arbitration award that found he did not meet contract qualifications for vacation pay.

A qualified employee is one who was on the payroll at the beginning of the 52-week period preceding the vacation and who actually has worked in 44 of the 52 weeks. Such an employee must have an hourly earnings record on which the amount of vacation benefit may be computed.

The grievant was paid his vacation pay for the calendar year 1957, without argument. His demand for the same treatment in 1958 went to arbitration, and he won it, although the present arbitrator, R. H. Morvant, says his predecessor did not

define or describe the method of computation used. The grievant made a new request for vacation pay for the calendar year 1959, and when the company refused, this latest arbitration came about.

It appears to Mr. Morvant that the union's case relied almost entirely on the 1958 arbitration and that it attempted by use of the doctrine of *stare decisis* to make the 1958 arbitration award a binding precedent for the future. But Mr. Morvant says that Armstrong should not be impaled on a previous award, which time and circumstances have outmoded. The grievant was not on the payroll 52 weeks before the 1959 vacation. Even if it had been deemed that he actually was at work by reason of his workmen's compensation payments, he would not have been on the payroll as the contract requires. If he had qualified on other grounds, lack of an earnings record would have defeated the claim.

● **Court decision**—Union's blocking of man's promotion rapped by court—Like the National Labor Relations Board, the Fifth Circuit of Appeals has decided that Local 450 of the Operating Engineers violated the Taft Act's coercion and discrimination prohibitions in blocking a man's promotion to master mechanic because he did not meet the requirements of length of union membership.

The man, an employee of Tellepsen Construction Company, doing maintenance and repair chores for Dow Chemical plants at Velasco and Freeport, Texas, had 31 years' experience as an operating engineer but had been a member of Local 450 for only two years. According to the board's and the court's finding, Tellepsen wanted to promote him to master mechanic. The union at first agreed, then reneged.

A business agent of Local 450 pointed out that the union's rules called for master mechanics to have three years' experience, that is, three years of union membership. Another man, with the required three years in the union, was given the job. The union's blocking of the veteran operating engineer's promotion was a violation of the two mentioned provisions of the act, the court said.

The finding is related to alleged closed-shop conditions at Tellepsen, under which only members of the Operating Engineers could secure employment, the court said. An interesting circumstance is that a master mechanic is equivalent to a foreman in that he has charge of a number of employees and hires operating engineers through the union as required by the union's rules. Had the man been promoted to master mechanic—making him a supervisor—and then demoted, he might not have been able to file charges because of the act's exclusion of supervisors from its protections.



Lions lose out, Chicagoans caught by gas displays



It's difficult to compete with a pair of lions for public attention, but that's what Harry Swenson, of The Peoples Gas Light and Coke Company, has been doing, successfully, for quite a few years. He doesn't do it with mirrors, but with a fine blend of artistic judgment, "the soft sell," and more than a little humor.

Mr. Swenson is the man responsible for the show windows of Peoples Gas, directly across Michigan Avenue from the two bronze lions which guard the portals of the Art Institute and are among the best known landmarks in Chicago.

These windows, with their changing exhibits, have become justifiably famous for their attractive treatment of the many changes which can be rung on the central theme: "What's new in the field of gas appliances?"

Sometimes a touch of whimsy, or humorous bit of imagined conversation, is used to lead the viewer into more

prosaic subject matter. These descriptions of typical windows, picked at random from recent examples, will serve to exemplify "the Swenson touch":

In a window keyed to the twin ideas, "gas heats up faster, cools off faster," cut-out figures of wooden horses gallop across panel backgrounds of early American wallpaper. Silhouetted wooden hands, like colonial signboards, point out the latest-model range.

A cigar-store Indian (female), with newly furbished robes and feathered headdress, gives visual emphasis to the message: "Pocahontas never saw a range like this—she never saw a gas range at all, period. But *you* should see all the wonderful features that make the modern automatic gas range the finest cooking appliance today."

Droll-looking dolls, with whisk broom bodies and faces of bright felt, set the mood and help make the point that it's "easier to keep your house neat

and clean inside and outside when you have a gas-fired incinerator."

Two polar bears, life-sized enlargements from charming ceramic miniatures, are shown looking at a modern appliance. "Look," says one to the other, "there's the new gas refrigerator." In the foreground the figurines themselves are shown.

Proper ladies of long ago, with the latest Paris bustles, chat primly in blown-up versions of old fashion prints to form a background for a gas clothes dryer and emphasize the slogan, "It's out of date to hang your wash on a clothesline."

In a Shakespearean scene, taken from a steel engraving, the maiden fair pleads with her beplumed knight errant, "Please don't go out again tonight, Al-gernon, dinner is about ready in our new automatic gas range—it will be perfect."

Facts and Figures

Prepared by A. G. A. Bureau of Statistics

Total operating revenues of the investor-owned gas utility and pipeline industry rose to a record level during the 12 months ended June 30, 1960, reaching \$8,427 million. This represents a relative increase of 15.7 per cent and an absolute gain of \$1,142 million over the \$7,285 million reported one year earlier.

Operating expenses rose 15.3 per cent over the previous year to a total of \$5,705 million, an increase of \$759 million. Depreciation, retirements, depletion, and amortization charges of \$549 million were 8.1 per cent higher than a year ago. Total tax accruals were at a level of \$1,074 million annually, up \$191 million or 21.6 per cent from the 12-month period ended June 30, 1959. Federal and deferred federal income taxes were up \$127 million, a 24.8 per cent rise over last year, and accounted for 59.6 per cent of the total tax dollar. All other taxes rose \$64 million to \$434 million, up 17.3 per cent from the previous period. The combined operating revenue deductions of \$7,328 million were \$991 million higher than the comparable period of last year, showing an over-all increase of 15.6 per cent. The resultant net operating revenue of \$1,099 million is 15.9 per cent or \$151 million greater than one year ago.

Sales of gas to ultimate consumers during the month of July, 1960, were 5.6 billion therms or 4.5 per cent greater than the sales of July, 1959. Consumption of gas by industrial users, accounting for 72.3 per cent of all sales during the month, amounted to 4.0 billion therms. This is equivalent to a 3.0 per cent increase and compares favorably to the 1.8 per cent rise experienced by all industrial activity as measured by the Federal Reserve Board. Sales for the 12-month period ended July 31, 1960 aggregated 91.4 billion therms or 6.9

PERTINENT BUSINESS INDICATORS, JULY, 1960 (WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	July			June		
	1960	1959	Per Cent Change	1960	1959	Per Cent Change
Industrial activity, FRB (1947-49 = 100)	166	163	+ 1.8	166	166	0.0
Consumer prices (1947-49 = 100)	126.6	124.9	+ 1.4	126.5	124.5	+ 1.6
Housing starts, non-farm (thousands)**	112.3	146.7	-23.5	125.2	152.1	-17.1
New private expenditures (\$ million)†	3,660	3,792	- 3.5	3,535	3,629	- 2.6
Construction costs (1947-49 = 100)	183.3	178.9	+ 2.5	183.1	177.9	+ 2.9

** New series.

† Revised to reflect effects of new series on housing starts.

GAS INDUSTRY INCOME STATEMENT (MILLIONS OF DOLLARS)

REFERS TO ALL INVESTOR-OWNED DISTRIBUTING UTILITIES AND PIPELINE COMPANIES

	Twelve Months Ended		Per Cent Change
	June, 1960	June, 1959	
Total operating revenues	\$8,427	\$7,285	+15.7
Operating expenses—operations	5,439	4,698	+15.8
Operating expenses—maintenance	266	248	+ 7.3
Operating expenses—total	5,705	4,946	+15.3
Depreciation, retirements, depletion, amortization, etc.	549	508	+ 8.1
Federal income taxes	640	513	+24.8
All other taxes	434	370	+17.3
Total taxes	1,074	883	+21.6
Total operating revenue deductions	7,328	6,337	+15.6
Net operating revenues	1,099	948	+15.9
Other income	131	79	+65.8
Gross income	1,230	1,027	+19.8
Interest on long-term debt	374	325	+15.1
Other income deductions	3	(6)	—
Total income deductions	377	319	+18.2
Net income	853	708	+20.5

per cent more than the comparable period last year. Industrial sales during the 12 months were 45.2 billion therms, a 1.9 per cent increase over the previous year.

Construction expenditures by the gas utility and pipeline industry during July, 1960, were estimated at \$149 million, 14.4 per cent less than the \$174 million expended in July, 1959. For the first six months of 1960 construction expenditures totaled \$739 million or 1.7 per cent less than the comparable period in 1959.

New housing declined sharply during

the month of July. Non-farm starts of the month aggregated 112.3 thousand, 23.5 per cent fewer than the 146.7 thousand homes started in July, 1959.

Manufacturers' gas appliance shipments for the month also continued below 1959 levels. Range shipments declined 21.1 per cent; shipments of central heating equipment were down 30.0 per cent; and dryer shipments were off 21.6 per cent. The water heater, with a 6.2 per cent increase, was the only major appliance showing improvement over last year.

(Continued on page 28)



Unapproved equipment may negate explosion-proofing of room



Proper maintenance is a must for explosion-proof equipment



Lights may be called "vapor proof," yet cause an explosion



Demonstrations show forces unleashed by flame propagation

Film shows taming of a flame

Precisely how flame travels through a flammable mixture in a confined space is dramatically demonstrated in a new motion picture film in full color entitled "Flame Propagation," sponsored by the Accident Prevention Committee of the American Gas Association, and produced in cooperation with the U. S. Department of the Interior, Bureau of Mines.

The film shows how pressure develops ahead of a flame as it travels through a mine, sewer, pipeline or electrical conduit. It explains clearly why and how flame travels, giving viewers a broad understanding of flame propagation.

Those who see this film should come away with a greater appreciation of safe practices recommended for flammable atmosphere; they should realize why approved electrical fixtures and equipment

are necessary; they should understand the importance of proper maintenance of these fixtures and equipment; and they should be fully aware of the folly of using an unapproved piece of equipment—which completely nullifies the safety of a large installation of explosion-proof or permissible equipment.

The film has a running time of 20 minutes. It shows the highlights of a series of demonstrations presented to industry by representatives of the U. S. Bureau of Mines.

Demonstrations illustrate how a flame travels through such confined spaces as mines, pipelines, sewers, electrical conduits, or explosion-proof electrical fixtures.

The flammable limits of a mixture are not only shown on graphs but dramatically illustrated in a glass tube. Pressure

piling is explained and demonstrated.

Attention-holding experiments explain and test explosion-proof fixtures and equipment. Other experiments show the danger of abusing these fixtures and equipment, or using equipment which has not been properly maintained. Still other tests prove the folly of using unapproved fixtures and equipment in flammable atmosphere.

The film promotes safety while working in flammable atmosphere—not by urging employees to observe arbitrary safe practices, but by showing the underlying reasons why safety precautions are necessary.

Cost per print is \$200.00. Prints may be ordered from Order Department, American Gas Association, 420 Lexington Avenue, New York 17, New York.

Gas industry accidents continue down trend

During the second quarter of 1960, the sample group of companies, selected as being representative of the gas industry, employed 77,047 or 36.9 per cent of the total number of employees whose services were utilized by the entire gas industry during 1959.

The sample group of companies reported that one additional fatality occurred during the current quarter than was experienced during the same quarter of the previous year. Permanent partial disabilities remained unchanged at 4 while 28 less temporary total disabilities were reported for the quarter ending June 30, 1960 when compared with the same period a year ago. The total of 244 disabling injuries which occurred during the current quarter resulted in a frequency rate of 6.25 disabling injuries per million man-hours of exposure, a decrease of 10.7 per cent from the 7.00 disabling injuries per million man-hours worked of the previous comparable period. Total days lost as a result of all disabling injuries which occurred in the current quarter were almost twice the days charged during the second quarter last year. During the second quarter 1960 the total number of days charged aggregated 20,656 while last year the total days charged due to

disabling injuries was 10,738. The severity rate for the second quarter of the current year was 529 days lost per million man-hours of exposure, an increase of 91.0 per cent over the 277 days lost per million man-hours worked during the same period last year.

Comparison of the accident experience of the sample group of companies for the first and second quarters of both years indicates that more disabling injuries occur during the second quarter of the year than during the first quarter. The frequency rate however, varies since it is based upon the number of man-hours worked. The frequency rate of the second quarter of 1960 was 4.9 per cent higher than the first quarter 1960 while the second quarter of 1959, although experiencing two additional disabling injuries over the first quarter of the same year, had a frequency rate which was 2.6 per cent lower.

The current six months accident data show that 471 disabling injuries or 6.10 disabling injuries per million man-hours of exposure occurred in that period, a decrease of 14.0 per cent below the 7.09 disabling injuries per million man-hours experienced during the first six months of the previous year. The severity rate during the current period,

however, increased to 412 days lost per million man-hours worked, an increase of 15.1 per cent over the 358 days lost per million man-hours last year.

The current six months sample data indicates that the gas utility and pipeline industry may be headed for another record year when compared with the 1959 annual accident experience of the gas industry. The frequency rate for the first six months of 1960 showed a decrease of 16.6 per cent from the 7.31 disabling injuries per million man-hours established during 1959.

Data on vehicle accident experience during the second quarter were reported by 70 of the sample group of 83 companies and represent 34.6 per cent of the 208,900 employees of the gas industry. The sample companies own and operate an average of 21,213 vehicles which travelled over 120 million miles during the first six months of 1960 and had 87 accidents which involved employee disabling injuries. The current rate of 1.50 vehicle accidents per 100,000 miles travelled was unchanged from the rate of last year's comparable period but increased 15.4 per cent from the annual rate of 1.30 vehicle accidents per 100,000 miles travelled during 1959.

GAS EMPLOYEE ACCIDENT EXPERIENCE Six Months 1960

	Annual 1959	First Quarter (Sample)		Second Quarter (Sample)		Six Months (Sample)	
		1960	1959	1960	1959	1960	1959
Number of reporting companies	508	83	83	83	83	83	83
Average number of active employees	192,942	75,931	75,075	77,047	76,589	76,489*	75,832*
Number of injuries							
Fatality	17	1	2	2	1	3	3
Permanent total disability	1	0	0	0	0	0	0
Permanent partial disability	107	6	2	4	4	10	6
Temporary total disability	2,744	220	265	238	266	458	531
Total	2,869	227	269	244	271	471	540
Days charged							
Fatality	102,000	6,000	12,000	12,000	6,000	18,000	18,000
Permanent total disability	6,000	0	0	0	0	0	0
Permanent partial disability	49,280	1,665	274	4,245	544	5,910	818
Temporary total disability	49,045	3,463	4,254	4,411	4,194	7,874	8,448
Total	206,325	11,128	16,528	20,656	10,738	31,784	27,266
Frequency rate	7.31	5.96	7.19	6.25	7.00	6.10	7.09
Severity rate	526	292	441	529	277	412	358
Vehicle accident statistics							
Average number of employees	150,952	71,804	69,695	72,289	71,195	72,047*	70,445*
Number of vehicles	46,646	21,121	22,481	21,304	20,425	21,213*	21,453*
Vehicle miles traveled (000)	545,494	58,402	52,764	61,954	61,531	120,356	114,295
Number of reportable accidents	7,105	1,029	954	774	759	1,803	1,713
Number of personal injuries	322	54	29	33	33	87	62
Accidents per 100,000 miles traveled	1.30	1.76	1.81	1.25	1.23	1.50	1.50
						77,171,437	76,154,312

* Average of first and second quarters.

Home magazine 'covers' a gas kitchen

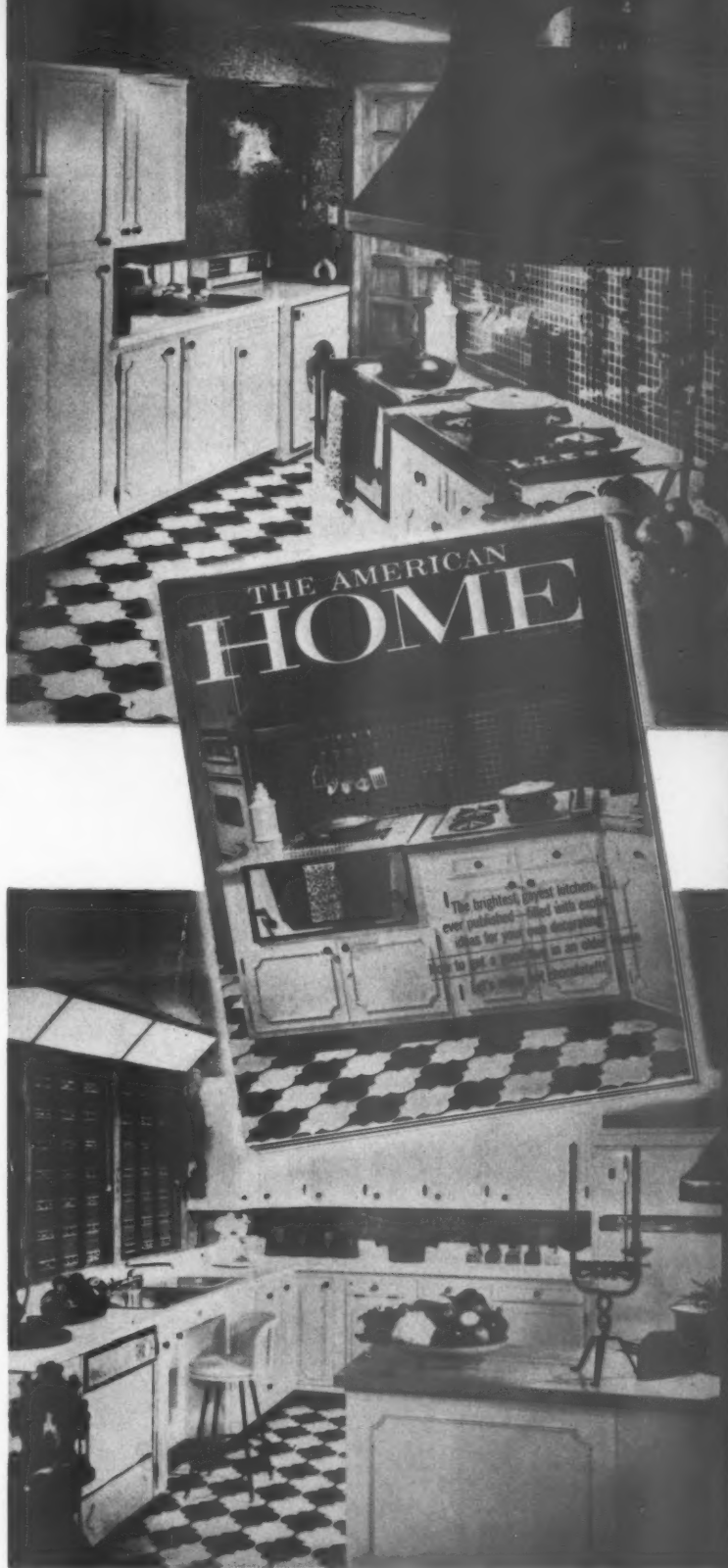
The *American Home* magazine believes that good kitchen planning and good decorating go hand in hand. In this imaginative "Kitchen in a Spanish Mood," the New Freedom kitchen featured on the cover of the magazine's September, 1960, issue, good planning began with gas.

The core of the kitchen is a handsome all-gas cooking wall featuring a gas surface cooking top and gas barbecue unit. The barbecue has a stainless steel cover that serves as a handy place to put food coming out of the oven. The free-standing gas refrigerator is framed for a built-in look.

The decor of the room, as it appeared on the cover and in the pages of *The American Home* is exciting. Executed in pepper red and royal purple, it is a brilliant complement to modern gas appliances and brings to the kitchen one of today's most important decorating trends, the Spanish influence.

This handsome gas kitchen currently is attracting attention at the A. G. A. Convention in Atlantic City, N. J. It also was shown at the convention in Denver, Colo., of the American Home Economics Association in June, 1960, and will be featured at the meeting in January, 1961, of the National Association of Home Builders.

New Freedom magazine kitchens are a cooperative activity of A. G. A.'s New Freedom Gas Home Bureau.





UNITED STATES
American Wives Organization
helpers assist A. G. A.'s
Mildred Bridges in U.S. booth

WALES
Britain's Sir Harry
Brittain enjoys
Welsh food, girls



INDIA
Exotic, spiced
dishes were specialty
at Indian booth



GHANA
GAMA's Margaret Spader
shows keen interest
in native utensils

U.S. team fares well in 'Cooking Olympics'

English lords and ladies, Londoners and visitors from other parts of the British Isles, and guests and delegates from many countries, were treated to a demonstration (and a taste) of American gas cookery by four top U. S. Home Service women last month.

The occasion was the 1960 International Food Fair—unofficially called the "Cooking Olympics"—held at London's Olympia Stadium, September 1-17, under sponsorship of the British Gas Council and the London Daily Express.

The four Home Service women making up the U. S. demonstration team were Mrs. Ellen Bridges, A. G. A. Home Service counselor; Miss Mildred Endner, Minneapolis Gas Company; Mrs. Elsie Alcorn, Milwaukee Gas Light Company; and Miss Margaret Spader, Home Service consultant for the Gas Appli-

ance
The
from
kitchen
the G
ing e
cialti
U. S.
tions
ing
decor
bassi
Du
the b
disting
exten
vision
tors v
Gi
assist
Agriculture



PAKISTAN
Colorful national
pottery, decorations
enlivened exhibit



ITALY
Italian food featured
standard ingredients
like garlic, salami

WEST INDIES
Seafoods, salads
were among Caribbean
dishes displayed



Turkey is carved by Mr. Wilson T. H. Beale of U.S. Embassy. Flanking him are Margaret Spader, left, Mildred Endner, Ellen Bridges and Elsie Alcorn of U.S. Home Service team

ance Manufacturers Association.

Throughout the fair, participants from twelve countries, occupying special kitchen-booths set up for each team by the Gas Council, staged marathon cooking exhibitions at which national specialties were displayed and sampled. The U. S. team gave live cooking demonstrations in addition to displaying its cooking wares. National art objects and decorations provided by the various embassies enlivened many of the booths.

During the period of the exhibition the booths were visited by a parade of distinguished guests, and activities were extensively covered by press and television. Approximately 300,000 spectators viewed the exhibits in person.

Giving the American team valuable assistance was the U. S. Department of Agriculture, which provided many of

the food supplies and released press information on the event. In return, the American team tied in its cooking activities with the sale of U. S. surplus foods on display at the show.

Also assisting were the U. S. Embassy and the American Wives Organization, which arranged for the services of two women each day to help the American Home Service women meet the audience and answer questions. American housewares shipped to England for the event were donated to the AWO at the closing of the Fair.

Main attraction at the American exhibit were light cakes and pastries prepared with packaged mixes, a novelty to most women overseas.

As the Fair progressed, the Americans set up a program in which they featured different regional foods each day, in-

cluding New England, Southern, Midwest, and West Coast specialties. A day also was devoted to picnic foods, and on the last Thursday of the Fair, a complete Thanksgiving dinner was prepared. The Minister of Economics from the U. S. Embassy, Mr. Wilson T. H. Beale, carved the turkey in an official ceremony.

Entrants from other nations took varying approaches in their exhibits. The French kitchen was tastefully decorated, with cooks wearing costumes designed by Paris couturiers. Foods were garnished to the limit. Indian and Pakistani kitchens featured exotic delicacies.

The Belgian, Danish and Netherlands kitchens were operated by volunteers or local hotel trainees. Other countries displaying national foods were Ghana, Italy, Spain, the West Indies, and Wales.

Safety conference

(Continued from page 7)

During open discussions they drew upon solutions and experience of others who had met similar obstacles.

"Flame Propagation," a new training film produced by *The U. S. Bureau of Mines* and A. G. A., was shown at the general session on Wednesday. Dealing with characteristics of a flame under varying conditions and the use of explosion-proof or perishable equipment, the 16mm sound and color film is available for distribution from A. G. A.

A second pictorial training aid, a film strip "Everything Under Control," stressed awareness, responsibility and methods. Both of the new training aids drew favorable comment from company representatives.

One of the most dramatic events on the program was a "Bell Hole Safety"

demonstration by Herman Quist, Jr., manager of distribution, Minneapolis Gas Company.

Stressing that safety practices presented in the demonstration are work rules which are enforced, Mr. Quist, with the help of an assistant, displayed mandatory equipment for emergency line repairmen at Minneapolis Gas.

Included were fireproof coveralls worn by workmen. These are unique in that they have web-belt material sewn into the cloth around the shoulders and down through the crotch, completely surrounding the torso. At the nape of the neck, a steel ring is imbedded in the webbing. At all times a strong rope is attached to the ring and held by a man at the top of the excavation. In the event of emergency, workers can be pulled out of the hole without exposing others to danger.

Coveralls were selected for the job

because they cover the entire body. Plastic bands sewn into the cuffs prevent fire from flashing onto arms or legs, according to Mr. Quist.

During the two day meeting awards for safety achievement were presented to 77 companies by E. H. Smoker, chairman, Executive Safety Committee. Fleet safety awards were won by 15 companies and delegates received plaques from P. E. Sheppard, staff representative from the National Safety Council.

A special award was made to the widow of Ernest S. Beaumont in recognition of her husband's contributions to safety in the gas industry.

Mr. Beaumont served as committee chairman in 1927. He was a long time member and pioneer of accident prevention in the industry. The presentation was made at the Wednesday meeting by Marvin Travis.

Meet your Association staff



Robert B. Smith

Robert B. Smith came to the research staff of A. G. A. in June, 1957, on loan, like a baseball player, from Columbia Gas System Service Corporation. His "one-year" assignment was as manager of air-conditioning research. However, A. G. A. soon decided to negotiate a longer-term contract for his services.

Coordinator of Research at Columbia Gas before joining A. G. A., Mr. Smith has ascended from his first position with the Association to the post of Assistant Director of Research.

He says of the role of the department, "We are the 'R' in PAR." PAR research was defined in a recent report of the PAR General Research Planning Committee as "a cooperative effort to improve our competitive position through technical means in all phases of the industry—from the natural gas well to the ultimate utilization in home and business." This requires pioneering, a constant search for new ideas.

These ideas are contributed by the 250 gas industry representatives on research committees, by other members of the gas industry, by research agencies, by manufacturers, and by members of the A. G. A. research staff—men like Mr. Smith.

Mr. Smith grew up in Columbus, Ohio, and went to Ohio State University there. He was graduated in 1948, with a bachelor's degree in

mechanical engineering. He and his wife live in Hartsdale, N. Y., and have a son and a daughter.

Mr. Smith plays bridge and tennis. He is involved with the complexities of hi-fi and is a proven do-it-yourselfer, having personally installed the wall paneling in his home.

Mr. Smith, who is amiable, quiet, and unassuming, describes himself as "just normal." This is to omit, however, what is soonest apparent to anyone who talks with him for even a few minutes. He has the attitude and the integrity of the independent thinker.

No particularly unusual circumstances have shaped or marked his life, he claims. "There was," he admits with a smile, "the time I broke my leg in China." It happened when he was with the U.S. Air Force during World War II. Playing catcher in a "pick-up" game of baseball during free time, he was struck and his leg broken by a man sliding into home plate. A troop alert had removed all available aircraft from the area, and there was a short, anxious wait while an attempt was made to locate transportation to a field hospital 90 miles distant. It was Chiang Kai-shek who finally came to the rescue. With the loan of his plush, paneled private airplane, the Generalissimo gave Mr. Smith and his injured extremity a most luxurious and much appreciated "lift."

The appraiser holds power to make or break standards in building and equipping new homes, says an authority

An open letter to appraisers

By PERRY PRENTICE

Editor and Publisher
HOUSE & HOME Magazine

(Reprinted from THE RESIDENTIAL APPRAISER, May 1960, as an article of special interest to the gas industry.)

I salute you (appraisers). I bow to you. I salaam to you. I make a deep obeisance to you. You are very important people. You are very important because you are the most powerful and influential factors in America's biggest industry. You are the men who determine what kind of houses are built and what kind of houses are *not* built. You are the men who determine in what kind of houses 200,000,000 Americans will live, in the year 2000.

Says Armel Nutter, your past president: "The lenders who put up the money and the appraisers who set the price can do more than anyone else to raise the standard of housing in America." The president of Owens Corning Fiberglas echoes on a more negative note: "We won't get anywhere selling quality until the appraisers and lenders get into the act and give full credit for the extra cost of quality in their valuations." Said *House & Home* three years ago: "Like the power to tax, the power to appraise is the power to destroy; it is also the power to create."

In today's housing world, where five new houses out of six are planned and built for sale to an unknown customer,

nothing but nothing is planned or built into the house that cannot be financed under the mortgage, because the builders have learned the hard way that anything that adds more than a fraction of its cost to the down payment will make the house harder instead of easier to sell. This is another way of saying that nothing, but nothing, is planned or built into a built-for-sale house that you appraisers will not give at least 100% credit for in your valuations. And one of the most intelligent builders told me frankly: "We builders have to give more thought to what the appraisers and the lenders will like than we give to what the home buyers will like, because we have to sell the house to the appraiser *before* we can offer it to the public."

One big reason why sliding glass doors swept across the country from coast to coast is that builders found that if they put glass doors in their houses, they could expect the appraiser to increase their valuations by much more than their actual cost. One big reason why almost every house built in the Los Angeles area from 1946 to 1954 had a too-small hot water heater miraculously guaranteed to need replacement the day after the one-year warranty expired was that builders found the appraisers would give a house the same valuation whether they spent \$40 for a no-good heater or \$120 for a heater with a ten-year warranty. And just about the most profitable house built last year was designed, not for low maintenance or

better living, but just for higher appraisal. The builder sat down and made a list of the items that would probably add more than their cost to the appraiser's valuation, and a second list of the items that would probably add less than their cost to the appraiser's valuation. Then he made a real killing by putting into his houses everything he thought the appraisers would over-appraise and leaving out almost everything he thought the appraisers would under-appraise.

So once again I salute you. I bow to you. I salaam you. I make a deep obeisance to you. You are just about the most powerful factors in America's biggest industry. What you bless with a high appraisal gets built. What you damn with a low appraisal does not get built.

The power is yours. I salute you. But great power like yours carries with it great responsibility. To whom much is given, from him much shall be asked. Says Armel Nutter: "The appraisers can do more than anyone else to raise the American standards of housing."

So today I come as a spokesman for the industry over which you exercise such power to destroy and to create, to ask some questions about your stewardship. Are you proud of the kind of homes that are built to meet your appraisal standards? Are you proud of the way land is being used to fit the land values you determine? Are you proud of the American standard of housing, or are you troubled by its failure to keep

pace with the meteoric rise in the rest of the American standard of living?

Some of the questions I want to ask you are most important to the architects. Some are most important to the builders, some to the manufacturers of housing products, some to the mortgage lenders. All of them are important to the home buyers.

I'm afraid most of these questions will come as a shock to you, because all of them challenge one of the most basic doctrines in the appraiser's credo—the doctrine I have heard so many appraisers echo—the doctrine that the market makes the price and you merely appraise it.

That may have been true in the old days, but in this age of high-percentage mortgages on built-for-sale houses you can no longer hide from your responsibility behind such an obsolete shibboleth.

In today's housing industry you do far more than appraise the price. To a very large extent you make the price, for two reasons.

Reason No. 1: The mortgage lender relies on your appraisal to fix the size of his loan; and in these days of small down payments the size of his loan almost always fixes the price of the house.

Reason No. 2: The home buyer likewise relies on your appraisal.

If you appraise a house at \$19,000 and the mortgage lender finances it at \$19,000, the home buyer will balk at paying \$20,000 for it, but he will take your word for it that he is getting good value at \$19,000.

And here are two more points I am afraid will challenge some of your basic thinking about the appraiser's responsibility.

Point No. 1: I have heard appraisers say the important thing is to get the right answer, and it does not make much difference how they get the right answer. I have had appraisers ask me if it really makes any difference if they cancel each other out and the final answer is right.

I don't believe the housing industry can live with that kind of appraisal thinking; certainly the housing industry cannot meet America's need of better housing with appraisals based on that kind of thinking. Every time you over-appraise land you encourage the builder not to worry about paying too much for his land the next time, and you aggravate the land price inflation which is now the home building industry's No. 1 problem. Every time you under-appraise

what a builder builds on his land you encourage the builder to leave out the quality you failed to recognize the next time he builds. Your two errors may cancel themselves out in this particular year for this particular house, but appraisals arrived at by cancelling out errors are bound to encourage higher prices for poorer houses, and appraisals arrived at by cancelling out errors are not likely to stand the test of time.

And now for Point No. 2:

I have heard appraisers say their responsibility ends with ascertaining the price at which a willing buyer and a willing seller could probably agree in today's market. I do not believe the housing industry can live with this kind of appraisal thinking either. The lender and the home buyer expect much more than that from you. The lender is tying up his money for twenty or thirty years on the basis of your appraisals; the home buyer is making the biggest purchase of his life on the basis of your appraisal; and both lender and home buyer feel they can count on you for sound judgment. They do not ask you what a willing buyer might be foolish enough to pay today. They expect your appraisal to reflect long term value, and they expect your appraisal to show what a wise buyer would pay and a wise seller would accept.

Your responsibility goes far beyond ascertaining today's price. Your responsibility is to determine long term value; that's why the word appraisal and valuation are used almost synonymously.

That's what makes you so important, and that's why I stand here as a spokesman for the industry over which you exercise such power, to ask questions that are very important to the industry.

On behalf of the architects I would ask what you have done and what you are doing to encourage better design, better planning, and all the better living the architects are learning to design into today's houses.

Rightly or wrongly, most house architects think you appraisers are the biggest single obstacle to progress towards better and more practical design. Said Arthur Watkins in the February *Harpers*: "The outmoded views of the appraisers, whose importance in home-building is often over-looked, is a widespread reason for mediocre design."

You know, I'm sure, that houses are style goods as surely as women's dresses are style goods; you know that houses

go out of style after about 20 years as surely as women's dresses go out of style after 20 months, so a good appraiser can walk down any street of any American town and tell by the style in what decade each house he passes was built. You know that the turreted neo-Gothic houses that were so fashionable in the gay 90's were hard to sell in the roaring 20's; you know that the almost windowless Spanish houses that were so popular in the roaring 20's are almost unsaleable in the golden 60's. So you can be very sure that the kind of houses that were so fashionable in the 40's will be hard to sell long before today's new mortgages run out.

But how many of you still make your appraisals looking backward? How many of you penalize forward-looking design in your valuations? How many of you give higher appraisals to houses built in the style that is going out than you give to houses built in the style that is coming in? How many of you recognize in your valuations the good and practical reasons why people in 1970 will want houses very different from the houses they wanted in 1930? How many of you, for example, recognize in your valuations that houses planned for tomorrow's rear living will be much easier to sell than houses planned for yesterday's front living? How many of you recognize in your valuations that houses planned for tomorrow's servantless living will be much easier to sell than houses planned for yesterday's living with servants? How many of you recognize in your valuations that houses designed with big overhangs to minimize heat gain and lessen the need of repainting will be easier to sell than houses without this protection?

How many of you, in brief, are helping the architects fit the style of tomorrow's house to tomorrow's changed way of living and tomorrow's changed costs of living? How much truth is there to the architect's constant complaint that you are so wedded to yesterday's style that you penalize every change they try to introduce?

And now on behalf of the builders I have some questions to ask you about what you are doing to encourage or discourage better construction—better construction that will save the home buyer thousands of dollars over the years.

You all know, I'm sure, that anything and everything that has to be changed

(Continued on page 30)

Advent of 'electronic brains' in utility accounting calls for some readjustments by human personnel

Internal auditing and E.D.P.

(A discussion by the A. G. A.-E.E.I. Internal Auditing Committee, summarized by H. R. Symes, The Detroit Edison Company)

Internal auditors are being required to re-evaluate their audit functions to meet their responsibilities as more companies in the utility industry plan, develop and install electronic data processing equipment.

Although the principal audit objectives remain unchanged the procedures to perform the audit and the system of internal controls are materially affected by E.D.P. systems.

An indication of the interest of internal auditors in the industry in exercising the proper initiative and imagination in the development and utilization of E.D.P. is illustrated by the A. G. A.-E.E.I. Internal Auditing Committee meeting recently held at St. Charles Hotel, New Orleans.

At this meeting, which some 70% of the members attended, the Subcommittee on Electronics devoted three hours answering questions from members. The panel consisted of H. L. Holmberg, Commonwealth Edison Company; H. R. Symes, The Detroit Edison Company; and P. M. Murdoch, Southern California Edison Company, representing J. J. Cruise, Consolidated Edison Company.

The panel received some 40 questions from A. G. A. and EEI members of the Committee in advance of the meeting. To expedite the presentation the panel combined similar questions to which was prepared one answer. About 12 questions were received concerning the internal auditors' participation in the development of electronic data

processing systems, the extent E.D.P. knowledge is required of audit personnel, and the effects of E.D.P. installation on internal audit staffs. The panel prepared the following general reply to these questions.

Participation in the Original Programming—Among the several A. G. A.-EEI companies with over a million customers that presently have in operation or are in the process of programming for large scale electronic data processing equipment, internal auditors have assigned personnel to the programming staff. The comments received indicated that all believed it desirable for the internal auditor to participate in the development of the original program. Similarly in the survey made by the Institute of Internal Auditors, it was the contention of most internal auditors that participation in the program development gave the internal auditor an understanding of what the machines can accomplish and how controls may be built into the program.

Probably the most impelling factor requiring internal auditors to participate in the advance planning of any procedure, in which electronic high speed machines are to be utilized, is the time required to program the operations. The time estimated to prepare for the adoption of the high speed machines is monumental. Most companies have estimated the time required to program the various operations, prepare sample runs for de-bugging and conversion of the records, at from 20 to 50 man-years. The time required to program, of course, varies with the volume of work to integrate numerous records into the new system and with the nature of the application.

Under these circumstances it can readily be appreciated that it would be impractical—and may nigh be impossible—for the internal auditor to await the completion of the programming before reviewing the procedure. For, if the auditor desires to make necessary changes to the procedures after the operations have been programmed, it may take considerable time and expense to reprogram.

Thus, among the several companies it has been beneficial to have auditing personnel work with the procedural staff to assist in the formulation of revisions that may be required to policies, practices and procedures, so that the program that is established for the electronic machines has satisfactory controls over operations.

Technical Knowledge of the Machines—As with any new innovation the internal auditor has to ascertain to what extent he should acquire a technical knowledge of the operations that are subject to audit. The fact that electronic data processing machines will be utilized on many operations that are subject to audit will require the auditor to become acquainted with electronic machine operations. A general knowledge of the machine is desirable for the auditor to appraise an electronic procedure. It does not appear to be a necessity for the internal auditor to become completely trained in the mechanics of programming for electronic equipment. However, greater efficiency should result if at least one member of the audit staff has considerable experience in system design and programming.

Case History of Companies—At Detroit Edison the Internal Auditing Department participated in the develop-

ment of the two systems now on IBM 705—namely, revenue accounting and employee data and payroll system. In the revenue accounting area one auditor thoroughly familiar with these operations was assigned to the programming staff. The auditor was placed in charge of the group which developed the controls to the system. This, of course, was very beneficial to both the programming and internal auditing since auditors would be primarily concerned with the controls. Programming in turn would be assured that the auditor would establish satisfactory controls. In the development of the Employee Data and Payroll System the supervisor in charge of these audits was assigned to the task force. In this case the task force outlined the payroll procedure. Programming which was represented on the committee took over the detail programming job. All significant proposed changes were submitted at meetings which the auditor, public accountants and other management personnel concerned attended. At these meetings overall policies, procedures and required controls were finalized. At the present time a feasibility study is in progress for the development of a new material and supplies procedure utilizing E.D.P. The Procedures and Methods Department is supervising a task force to which an auditor will be assigned.

At Consolidated Edison Company some members of the audit staff took the programming course afforded by the computer manufacturer with those destined to be permanent programmers, and worked with them in the application for approximately two years. In addition, the weekly staff meetings before and during the conversion period were attended by auditing members, as well as the public accountants, and all significant changes proposed in the program were submitted to the auditors for review for the purpose of assuring that the existing controls would be effective under the new system.

At Commonwealth Edison Company it is felt that personnel who audit E.D.P. operations should be exposed to some training of the hardware and programming such as courses offered by computer manufacturers. It is suggested that such personnel be exposed to at least one of the basic courses for familiarization with basic terminology and the approach to the problem of adapting accounting systems to the computer. A

course of 2 to 4 weeks duration may be adequate to cover the general information necessary to approach a problem intelligently. Obviously, such personnel should be thoroughly familiar with the accounting area to be reviewed. Generally, the scope of a computer system is so great, and the operations are so interrelated and complex, that anything less than a complete understanding of the over-all system will produce ineffective audit results.

Experience at Commonwealth Edison has shown that adoption of a computer system has increased the need for higher caliber audit personnel. The need arises from the requirement that the audit staff evaluate the propriety and accuracy of input and output data and to some degree appraise clerical performance in applicable departments.

Conclusions—The auditor should, as a minimum, participate in the development of the program as follows:

1. He should at least have some general knowledge of the operation of the hardware of the computer which is to be utilized to the extent that he knows its general functions and its capabilities.
2. He should be or become familiar with the present system applicable to an activity and be thoroughly informed about the framework upon which the proposed computer program is to be developed.
3. He should have a complete understanding of the control measures incorporated in the program and the hardware.

From the experience of the respective companies represented on the panel, it may be concluded that the internal auditors assigned to these task forces can materially assist in the development of the program, especially the controls, and also acquire considerable knowledge of the new E.D.P. system. Through this process audit personnel can be developed that can be assigned the responsibility for the training of other auditing personnel and most importantly the development of the audit program to cover the new E.D.P. system.

With these general remarks in answer to the 12 questions, the panel presented specific answers to other remaining questions submitted.

Q.

In those companies utilizing large scale computers in their revenue accounting system what method is used to

assure auditors that accounts are set up and billed for all meters in service?

A.

In regard to meter control, a program is now being perfected at Consolidated Edison whereby a count of the meters in each ledger will be made at the time the master file passes through the computer and compared with the number of meters which should be in the ledger as shown on the meter control. The result of this comparison will be announced on the console typewriter. This information can be reviewed by the internal auditor.

Control measures used by Commonwealth Edison Company to assure billing for all meters include certain measures specifically designed for control purposes and other measures that are inherent in the computer record keeping system. Before describing these control measures, it may be advisable to discuss the system briefly.

All receivable records are maintained in the general office on computer tape for billing and bookkeeping purposes. In addition, a Customer Service file is maintained on IBM cards in each division headquarters for the meters in service in the respective divisions. These card records are used to produce meter reading cards and to process meter orders only. Changes in card record data resulting from meter orders are reproduced on instruction cards which are forwarded to the computer area for revision of the tape record. Thus the system includes an important inherent control aspect in that every meter record on tape in the general office has a supporting card record in the division.

With this brief description as a background, following are control measures used to assure billing for all meters in service:

1. The Meter Department holds a follow-up record for all meter installations completed in the field. Upon completion, the installation order is forwarded to the division headquarters for production of a Customer Service card for the meter. From this record, two cards are reproduced. One is forwarded to the computer area to establish billing records on tape and the other is forwarded to the Meter Department to assure that billing records have been established.
2. Meter reading cards are produced from the Customer Service cards. After

(Continued on page 29)



Aerial view of huge headquarters plant of the Black & Decker Manufacturing Company



Fresh, comfortable air is circulated through machine shop housing 1,000 employees

Natural gas air conditioning received significant endorsement when The Black & Decker Manufacturing Company, the world's largest maker of quality electric tools, put into service a 713 ton gas engine driven refrigeration system to air condition its huge headquarters plant in Towson, Maryland.

Situated in a geographical area where competitive fuels for steam absorption air conditioning enjoy substantial price advantages, Baltimore Gas and Electric Company has won an important natural gas load for what it believes to be the largest single-engine air conditioning installation in the country. More than four acres of manufacturing area—180,000 sq ft—are under climate control.

Even more important to Baltimore Gas and Electric has been the highly successful "shake down" operation of this unique, large tonnage gas air conditioning installation. Word of success travels quickly, especially when a firm as outstanding as Black & Decker is the in-

novator. The name is synonymous with industrial progress, particularly in the Baltimore area.

A twelve cylinder natural gas engine, rated at 915 hp at 1100 rpm, furnishes the power for the cooling plant. Manufactured by the Waukesha Motor Company, Waukesha, Wisconsin, the large gas engine is the unusual component in the large compressor-type installation. A speed increaser, with a step-up ratio of approximately 8-1, is employed between the engine and a centrifugal compressor. The compressor, a Worthington, is rated at 776 tons operating at 8500 rpm and uses refrigerant #12 in its cycle to operate a water chiller unit.

The air handling equipment consists of seventeen Trane fan coil units strategically positioned throughout the plant, and a system of ducts for complete distribution of the conditioned air.

All machinery, with the exception of the air handling equipment and the water tower, is neatly housed in a newly

Gas 'climate controls' a giant plant

constructed building designed specifically for this purpose. This building is attached to the main plant at the basement level inside, street level outside. This makes it particularly functional for maintenance checks and operational efficiency. Inside, the noise level is relatively low, comparing favorably with that of a similarly large capacity electric motor installation. Outside the building, the noise is reduced to only a murmur. The water tower is a Lilie-Hoffman and has an 1100 ton heat rejection capacity. It is located about 30 ft to the rear of the building.

The installation at Towson is unusual in another regard: its main purpose is to provide comfort cooling for more than 1,000 employees. Many manufacturing areas are air conditioned, of necessity, to control and improve product quality. At Black & Decker, providing comfortable working conditions year-round for employees is another in a lengthening list of fringe benefits that

are offered to workers.

The Austin Company, Cleveland, Ohio, was assigned the engineering and construction of the system and after thorough study recommended the gas engine drive as proposed by the Baltimore Gas and Electric Company. Said Mr. Adam Quick, vice president of Black & Decker, "During the planning stages, we studied the types of equipment and the natural gas engine was our answer for top cooling efficiency at the lowest over-all cost."

Although the gas engine was higher in cost than electric motor drive, the total installation cost was essentially equal for either prime mover because the electric drive would have required a much larger substation for the supply of electricity. Steam absorption equipment was ruled out by the study because of the requirement for increased boiler plant investment and substantially higher operating costs. Upon selection of the gas engine drive system, The Austin Company received the contract

for this \$520,000 project.

In addition to a satisfactory first cost, the gas application will result in substantial operating economy. Baltimore Gas and Electric Company engineers conservatively estimate the annual operating cost to be about \$2,600 lower than electricity. The Baltimore utility offers a special air conditioning gas rate, expected to result in this case in an average cost of 73 cents per Mcf of 1,030 btu natural gas.

The Black & Decker installation is a milestone in the progress of gas air conditioning, say Baltimore Gas and Electric officials. Generally, they point out, large tonnage loads are served by absorption machines and centrifugal compressors. The latter can be driven by electric motors, steam turbines or, as demonstrated in this installation, by high-compression, high-economy gas engines. While splendid progress is being made in many areas of the country with absorption machines and steam turbines, supplied with gas generated steam, suc-

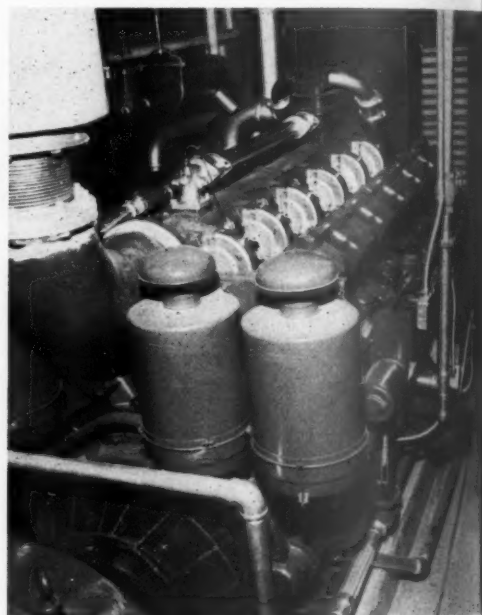
cess in obtaining this business depends largely on a favorable ratio of gas cost to heavy oil cost for steam generation. In the large Northeastern sector of the country there are many areas where the ratio is such that progress in obtaining absorption load is slow.

In addition to the competition from heavy oil, operating costs for absorption are unlikely to offer a sufficiently attractive margin over electricity to permit the sale of gas where electric drive centrifugal compression is the alternative method. On the other hand, high-economy gas engines have fuel rates per ton of about 33 to 40 per cent of that of absorption machines, and about 50 to 60 per cent of that of a good steam turbine.

Thus, the gas engine appears to offer a sound and practical approach to getting large tonnage load for gas at gas rates higher than the Btu cost of heavy oil, and at rates such as will yield a satisfactory profit to the gas supplier.



Gas engine is located behind four air filters, right center. Insulated muffler appears overhead of neatly installed refrigeration plant



12-cylinder, 915 hp gas engine is said to be nation's largest single-engine gas air conditioning installation



Morning speakers were Robert E. Ritter, left, Rodger D. Stanwood, John G. Hopping, Buell Duncan, and Ralbern H. Murray of A. G. A.

Symposium draws textile leaders

One hundred delegates attended the 4th Annual Textile Symposium held in Sedgefield Inn, Greensboro, North Carolina, on September 15 and 16.

Sponsored by the A. G. A. Textile Processing Committee, John G. Hopping, vice president, Piedmont Natural Gas Company, chairman, the Symposium presented another opportunity for key representatives of the textile industry, textile machinery manufacturers, manufacturers of gas equipment for textile processing, and gas utility men to hear talks by industry leaders and to exchange ideas on processing techniques.

Opening remarks and an official greeting from Buell Duncan, president, Piedmont Natural Gas Company, stressed the importance of attending industry meetings "to swap ideas and learn something." The secretary of the A. G. A. Industrial and Commercial Gas Section, Ralbern H. Murray, referred to the advancements made by the textile and gas industries and stated it was incumbent on both industries to make fullest use of these advancements and the benefits to be derived from research in order to progress.

From Transcontinental Gas Pipe Line Corporation, Rodger D. Stanwood informed his audience of the vast job of keeping transmission lines in maximum service. He told about



P.M. speakers were John D. Shepard, B. R. Andrews, W. W. Dukes, Jr.



John Sellors, Jr., gave an illustrated lecture on gas combustion

development of gas reserves, which involves the talents of geologists, engineers and a host of other professions, and about purchasing gas from a variety of sources in much the same manner that a textile mill purchases its raw materials. Mr. Stanwood advised delegates that present reserves of gas and new discoveries of gas each year will assure a supply far into the future.

It was learned from Robert E. Ritter of E. I. duPont de Nemours & Co., that the textile industry as we know it, was started 200 years ago in September. Of course, textiles have been known since ancient times but the anniversary now being celebrated refers to textile production outside of the home and in an organized environment as a business.

His reference to man-made fibers, which were actually invented in 1884, traced the history of this phase of textile production to the present day. First efforts were to imitate natural fibers, and it was not until 1924 that nature was bypassed and new fibers having their own characteristics were developed.

In order to get maximum benefit from natural gas, stated W. W. Dukes, Jr., vice president, Applied Engineering Co., Inc., Orangeburg, S. C., it would be most advantageous to purchase gas at the lowest possible rate.

This most often involves interruptible contracts with gas companies and presents the problem of stand-by service.

Mr. Dukes went into detail on how propane-air stand-by plants could work out economically for the larger textile plant purchasing lower priced natural gas.

On plant air conditioning, John D. Shepard, Davidson and Associates, Greensboro, brought up several points by which textile mills could benefit.

He described systems for air washing which removes lint and contributes to plant cleanliness. It was pointed out that with the addition of refrigeration for both temperature and humidity control, far less air need be handled than for just washing. With the addition of cooling, a dual purpose is accomplished, in that both proper air and worker comfort are provided for.

Control is important, he stated, because of the fact that after several hours of operation plant machinery stores up considerable heat, which must be compensated for if a satisfactory level of comfort is to be maintained.

B. R. Andrews, vice president, Andrews & Goodrich Co., Boston, in talking about gas utilization by a textile finishing plant presented four main points on the advantages of gas.

First, there are no stand-by losses

of heat when the unit is shut down.

Second, investment in piping, valves, and similar equipment is only a small fraction of the cost of generating steam for a like Btu capacity.

Third, processing equipment can be operated at higher temperatures, at which the capacity of the units improves, thus lowering the cost of finishing per yard of cloth.

Fourth, control is better when overheating and overdrying are avoided.

Mr. Andrews went on to describe some of the newer gas-fired equipment available to textile plants, and specific gas applications giving much higher capacities and increased yardage.

The final morning session was devoted to a three-hour "school lecture" on gas burners and burner systems by John Sellors, Jr., Bryant Industrial Products Corp., Cleveland.

Mr. Sellors made sketches of various types of burners and told how air and gas is mixed in proper proportions for burning, and how and why a burner works. The descriptions were illustrated by use of a series of burners demonstrating various types of flames, and what can happen when something goes wrong in the gas supply and burner system.

Many of the delegates remained after the session to ask questions and otherwise gain information relating to their own gas applications.

Campaign calendar

(Continued from page 3)

November—Home Service and Educational Service.

December—Holiday Campaign.

It is emphasized that though each month singles out one area of gas service or one gas appliance for special promotion, each month also is a time for continuing promotion of other gas services and appliances.

Physically, the Campaign Calendar is designed in the form of a standard flip-leaf monthly calendar. Thus, as each month's campaign plans are disposed of, attention can be focussed on the next month's integrated campaign at the turn of a page.

Shown on each page are a calendar of the days of the month with announcements of special events, illustrations of promotion materials available for tie-in, and pertinent information and reminders.

For example, the Campaign Calendar for January, 1961, a "Gas Dryer Month," shows that national gas dryer ads will appear in leading magazines on January 3, that *Gas Industries Magazine*, with a page of free newspaper ad mats, will be out on January 25, and that an A. G. A. exhibit will be shown at the National Association of Homebuilders Convention beginning January 29.

Illustrated are materials and sales aids including a "Big 10 Gas Dryer Book," "Gas Dryer Sales Maker," full-color Gas Dryer 24-sheet posters, and premiums for developing showroom traffic, all available to members through the A. G. A. Promotion Bureau.

Suggested are five more good months to promote gas dryers—February, March, August, September and October.

At the bottom of the page is a reminder that January is high time to be planning ahead for the Gas House Heating Campaign scheduled for March.

Among advertising programs tying-in with promotions are the gas industry's new network TV presentation, "The Barbara Stanwyck Show," and a series of regionally-tailored gas househeating ads appearing in the *Saturday Evening Post* and elsewhere. In addition, regular advertising programs have been expanded.

Many new posters, displays and other materials are introduced for the first time.

The Campaign Calendar was developed under the guidance of the A. G. A. Promotion Committee, headed by Philip E. Arnold, Milwaukee Gas Light Company. Though slightly more costly, the new-style book is expected to prove more useful and effective in promotional planning throughout the year than any previous edition of the Plan Book.

Transmission Roundtable a 'first'



G. J. GILLIAN



H. S. GERMAN



LOWELL L. ELDER

On August 30, 1960, the first annual A. G. A. Northeastern Regional Transmission Roundtable was held at the Pittsburgh-Hilton Hotel in Pittsburgh, Pennsylvania.

This Transmission Roundtable session was split into two concurrent meetings: a pipeline discussion group and a compressor discussion group. These meetings were informal, off-the-record discussions, composed of member gas company personnel from the Northeastern United States.

The Compressor session was attended by twenty-one people, representing thirteen companies and eleven states. The Pipeline session was attended by twenty-eight, representing eighteen companies and fourteen states. The Compressor session was moderated by G. J. Gillian, superintendent of compressor stations for the Panhandle Eastern Pipeline Company. The Pipeline session moderator was H. S.

German, vice president of construction and maintenance for the Commonwealth Natural Gas Company. Responsibility for obtaining the moderators fell upon the Compressor and Pipeline Subcommittees respectively.

The Northeastern Regional Roundtable program was an activity generated by the Transmission Committee under its chairman Lowell L. Elder. It was felt that there were areas of the gas industry which presently do not have access to an adequate medium of information exchange. For an initial effort, the Northeastern area was selected. Interest and participation in this first effort were sufficiently high to confirm plans for conducting this Northeastern Roundtable on an annual basis. Future such meetings will probably be held in the early spring, and the location will rotate around cities in the New York area.

In order to develop an agenda for the two sessions, prospective delegates were

asked in advance of the meeting to submit a list of topics which they would like to discuss. Vigor of the response was such that the final agendas placed a considerable burden on the shoulders of the moderators to hold discussions down to a reasonable minimum.

Subject matter covered all manner of engineering and operating problems. For example, the compressor session covered such varied subjects as: the selection and training of supervisors; which horsepower per million curve is correct; the economy of purchase and operation of two-cycle versus four-cycle engines; piston ring life; staffing and operation; the flexibility of reciprocating versus centrifugal compressors, repairing worn-out parts, mineral oil versus detergent oil; preventive maintenance programs; noise abatement; emergency shut-down equipment; exterior paint schemes; periodic oil changing; and automation.

The pipelines session also ranged far

afield. For example, discussion covered such subjects as: design of farm taps; leakage repair on high strength pipe; right-of-way width during and after construction; the use of low hydrogen welding rod; upgrading old pipelines; pipeline location; high yield strength; low alloy pipe and fittings; casing design; how to make hot taps on high pressure pipelines; internal coating of

pipe; noise problems in congested areas; chemical brush control; onstream versus offstream pigging; safe purging practices; hydrostatic testing problems; problems in obtaining right-of-way; foot patrol versus conventional aircraft patrol versus helicopter patrol; and leakage inspection practices.

Few of the problems discussed were completely settled. However, it is be-

lieved that informal, off-the-record discussions between people with mutual problems are one of the most effective means whereby solutions to at least some of these knotty problems will be reached. The conference made it clear that no one company has a corner on sticky problems and that problems of the type described are common to many companies.

"Gasigns"

(Continued from page 9)

to develop new uses for gas and to help give gas air conditioning the prominent place on the market which it rightfully should enjoy."

Under the able leadership of R. K.

Eskew, vice president—engineering, research and development, Arkla's engineering staff has tripled in the last two years. Its product development budget likewise has tripled during the same period. Besides a number of improvements made on its existing Sun Valley

small-tonnage gas air conditioners and water chillers, Arkla already has introduced nearly a score of new gas-burning products to the market. In 1959 alone, nine new products were released to manufacturing and marketing.

Most significant among the really new Arkla gas appliances has been the "Gas-lite." Over a dozen models and accessories have been developed since Arkla "reintroduced" gas lighting to America in early 1958. Production to date has topped the quarter million mark, making Arkla the leading maker of gas light equipment.

A beneficial side effect of the corporation's success with gas lighting is that it has helped accelerate over-all product development; a substantial share of Arkla's "Gaslite" profits has been plowed back into engineering and research.

Another important non-air conditioning development has been the addition of the quality Humphrey line of gas heating equipment.

In 1960, Arkla is moving full speed ahead with a host of engineering projects. Coincidental with its recent introduction of the 25-ton water chiller-heater was its release to production of the Sun Valley 3½-ton "remote" model. Incorporating the same no-moving-parts absorption design and high performance standards as Arkla's current Sun Valley line, this versatile new gas-fired unit is likewise capable of a broad range of air conditioning applications. Both units are now in production.

Now in various stages of development are intermediate-capacity models from 3½ to 25 tons and beyond, in this new family of gas-operated remote chilled-hot water equipment. Research and development work also is under way on still other new gas air conditioning applications, new gas lights, and various other products and components.

All of this is dedicated to a single aim: The development of new and better uses of gas.

Facts and figures

(Continued from page 12)

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING JULY, 1960

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	July		June		First six months, 1960	
	Units	Per Cent Change	Units	Per Cent Change	Units	Per Cent Change
RANGES (including built-ins)						
Gas	113,400	-21.1	167,200	- 2.2	932,100	- 3.9
Electric	n.a.*	n.a.	126,200	-16.6	783,900	- 7.7
WATER HEATERS						
Gas	260,200	+ 6.2	256,200	+ 2.5	1,355,500	-12.1
Electric	n.a.	n.a.	58,300	-27.7	351,200	-19.7
GAS HEATING—Total	93,568	-30.0	104,998	- 9.5	502,056	- 5.4
Furnaces	72,600	-26.5	80,200	-11.7	395,200	- 8.9
Boilers	12,168	-23.7	14,498	- 1.8	58,166	+ 7.3
Conversion burners	8,800	-53.4	10,300	- 1.9	48,700	+14.6
OIL-FIRED BURNER INSTALLATIONS	n.a.	n.a.	36,089	-18.6	245,707	- 1.4
DRYERS						
Gas	22,316	-21.6	22,903	- 0.3	170,269	- 1.8
Electric	50,264	-24.7	42,047	-12.1	312,328	-10.8

Sources: Gas Appliance Manufacturers Association, National Electrical Manufacturers Association, "Fuel Oil and Oil Heat," and American Home Laundry Manufacturers Association.

* n.a.—not available.

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING JULY, 1960

(MILLIONS OF THERMS)

	Month of July			Twelve Mon'hs Ended July 31		
	1960	1959	Per Cent Change	1960	1959	Per Cent Change
Natural gas	5,506.4	5,259.5	+4.7	89,109.6	83,156.4	+ 7.2
Manufactured and mixed gas	92.5	100.6	-8.1	2,311.7	2,383.0	- 3.0
Total gas	5,598.9	5,360.1	+4.5	91,421.3	85,539.4	+ 6.9
Residential, commercial, and other	1,551.1	1,429.2	+8.5	46,207.4	41,172.8	+12.2
Industrial	4,047.8	3,930.9	+3.0	45,213.9	44,366.6	+ 1.9
July indices (1947-1949 = 100)						
Total gas sales (A. G. A.)	262.5	251.3	+4.5			
Residential, commercial, and other (A. G. A.)	232.0	213.8	+8.5			
Industrial (A. G. A.)	276.3	268.3	+3.0			

Accounting

(Continued from page 22)

meters are read, the reading cards are forwarded to the computer area for billing. In the event there is no computer record for a reading card, a memorandum is produced and forwarded to division headquarters for investigation to assure that a computer record will be established if necessary.

3. A statistical record is prepared bi-monthly by the computer showing meter installations and removals. This record is forwarded to the Meter Department to verify that the installations and removals as shown by the computer agree with the Meter Department records.

4. Periodically a complete mechanical audit is made to verify that the meters in service as shown on the computer tape record agree with the meters in service as shown by the Meter Department records.

Q.

What control measures are there to assure that all external entries such as meter orders, customer account adjustments, credit refunds, transfers, etc., are properly reflected on the computer records?

A.

Most of the external documents are prepared by the respective commercial departments within each of the divisions of the Commonwealth Edison Company. These documents are controlled as follows:

1. A transmittal is used in forwarding meter orders to the computer area and such transmittal indicates the number and type of documents being forwarded. All other external entries are sent in without a transmittal.

2. Computer personnel verify that the number of meter orders received agree with those shown on the transmittal.

3. External entries other than meter orders are separated by type of transaction by computer personnel and an adding machine tape is prepared to determine the total amount each day of the various types of transactions.

4. Such external entries are then key punched and key verified. A listing is prepared from the cards and the totals thereon compared to the adding machine totals.

5. Having established the accuracy of the card data, the cards are introduced into the computer tape system. The amounts introduced to the system are subsequently verified by comparing the computer total printed out against the original adding machine tape totals for the day.

6. External entries are reviewed by computer personnel for proper authorization, etc., before such documents are introduced into the computer system.

7. The Internal Audit Staff scans such entries daily to determine the propriety thereof.

Q.

What is the scope of built-in controls? How can the internal auditors utilize E.D.P. installations in their audit work?

A.

At Consolidated Edison Company there are a number of checks that are now being performed which can be utilized by the internal auditor. A few examples of these are as follows:

In the Change Edit Run some of the checks consist of a daily count of ledgers on master file to assure no loss of file, input item count balanced with output item count, and ledger number checked against master index to assure a valid number.

In the File Maintenance and Billing Run, for example, before posting a change or bill order, some of the checks made are: to be sure that the service indicated exists in the master file, that the change is consistent with the activity code (a turn-off for a service already turned off is rejected), and that the to-date of the last bill rendered is not later than the to-date of the new bill order.

During processing and immediately after processing a change bill order or cycle reading some checks are: that when a reading of four significant digits is received the dial code indicates a four-dial meter; that there is no hold code on cycle card before processing; and that a cycle reading card is present for every account on cycle and an account is on the master file for every cycle reading card.

Lastly that the consumption for the current period is compared with previous periods to detect unusually high or low usages.

Q.

Do the companies using electronic

data processing system audit the E.D.P. section as such or do they perform their audits in connection with general audits of accounts receivable, purchasing, payables, payroll, etc.

A.

At Detroit Edison each function is audited separately, e.g., accounts receivable, payrolls. The audit consists of a complete appraisal and examination of the whole activity which includes many external functions along with the E.D.P. processing operations. I think you will agree that under our committee's present concept of operational audits the electronic data processing operation would be only a part of the whole function under audit.

The foregoing is representative of only some of the forty questions submitted to the panel by internal auditors.

The conclusions reached by the pioneers of auditing electronics in contemplating the questions submitted follow:

Participation in the Development of E.D.P. Program—It is strongly advocated that internal auditors participate, along with personnel from accounting, electronic data processing, and other concerned departments in the development of the program particularly for the purpose of the establishment of necessary controls to the E.D.P. system.

Technical Knowledge of E.D.P.—A general knowledge of E.D.P. hardware equipment is desirable in order for the auditor to appraise electronic procedures. To this end the personnel of several companies took courses offered by the computer manufacturers. It is also believed that it is not necessary for auditors to become completely trained programmers; this may be left to the programming staff. However, greater efficiency should result if at least one member of an audit staff has knowledge of system design.

Auditing E.D.P.—As a consequence of the above activities internal audit personnel are developed who can be assigned the responsibility for the training of the audit staff, development of the audit program to cover the E.D.P. system and most importantly the utilization of E.D.P. to perform audit operations at lower costs.

To appraisers

(Continued from page 20)

or added after a house is finished costs two or three times as much as it would have cost to do it right while the house is being built.

You rightly penalize a house without inside plumbing by deducting from your valuation whatever you think it will cost to tear up the walls to put in a bathroom. You rightly penalize a cold-climate house without central heating by deducting from your valuation whatever you think it will cost to tear the house apart to put central heating in now. And in each case this penalty has to be much more than it would have cost to provide the bath or the central heating in the first place, because providing a bath or providing central heat costs two or three times as much after the house is finished.

But what are you doing to encourage air conditioning, without which Housing Administrator Norman Mason and FHA Commissioner Julian Zimmerman have both said that most houses built where summers are hot (which means almost anywhere from Texas to Minnesota) will soon be obsolete? Are you penalizing new houses built without air conditioning as you would penalize new houses built without central heat? Or are the builders right when they say the biggest reason they do not make air conditioning a big selling feature is that they have so much trouble getting credit for its cost in their appraisals?

How about adequate wiring? Many home buyers have to spend close to \$100 within a few months to provide added electrical service that would have cost only \$10 during construction. Are you penalizing inadequate wiring in your valuations, or are the builders right when they say they have trouble getting you to cover its slight additional cost. What about adequate piping for gas?

What about adequate insulation, which will save its added cost in just a few years in cheaper heating bills and save its added cost twice as fast in cheaper cooling bills? Adequate insulation costs two or three times as much to add after the house is finished. Do you penalize houses built without adequate insulation? Or are the builders right when they say they have trouble getting you to cover its slight additional cost?

What about adequate room sizes? Four out of five new houses have bed-

rooms smaller than the smallest size the Metropolitan calls "acceptable," bedrooms smaller than the smallest size at which the Small Homes Council research found it possible to make them good. Do you penalize these too small bedrooms in your valuations?

What about adequate storage—whose lack is the biggest single reason home owners give for not liking today's new homes. Do you penalize inadequate storage in your valuations?

What about adequate labor-saving equipment in the kitchen—labor-saving equipment the builder can provide during construction for half what it will cost the home buyer later on? What about the second bath which is fast becoming a must for three-bedroom houses—the second bath that is almost impossible to squeeze into a small house after it is built?

And now, on behalf of the manufacturers, I have some questions to ask you about what you are doing to encourage or discourage the use of quality products throughout the house—quality products that are a bargain because they cost no more to install than the cheapest products that will just get by FHA, quality products that can make the house much more livable for just a few dollars more.

Are the builders right when they say they get the same valuation if they use second-line fittings in the bathroom—second-line fittings that are bound to leak and drip within a few years? Are the builders right when they say they get the same valuation if they buy a cheap and noisy wash-down toilet with a short-lipped bowl? Are the builders right when they say the appraiser never bothers to look at their switches and outlets, so they get the same valuation if they save a few dollars by buying competitive-grade devices that are bound to arc and make trouble—with each separate replacement costing the home buyer more than the added cost of using specification-grade devices throughout the entire house? Are the builders right when they say they get the same valuation if they use cheap hardware—even hardware so cheap that four new houses out of five don't even have a safety catch on the outside doors?

Whether the builders are right or wrong really makes very little difference. As long as so many builders think the added cost of quality will have to come out of their own pockets because they can't count on you appraisers to cover

its higher cost in your valuations so they can finance it under the mortgage, the result will be the same.

Next, I would like to ask you some questions on behalf of the land developers.

What are you appraisers doing to debunk the biggest and costliest land-price hoax since the Mississippi bubble burst nearly 250 years ago? Are you aiding and abetting the hoax by reflecting today's inflated land prices in your valuations? Or are you keeping your heads while all about you are losing theirs? Are you basing your valuation on what suburban land is likely to be worth when this land-price boom collapses as every other land price boom has collapsed? Or are you helping the land speculators price good housing out of the market?

Soaring land prices rank with tight money and bad selling as one of the three most critical problems the housing industry faces today. In fact, the home builders have just voted it the biggest problem of all by a vote of 4 to 1. Says Frank Cortright, first executive officer of NAHB: "It gets harder and harder for a builder to make any profit at all after the land speculator has taken his profit out first." On some houses the land speculator gets almost as much money for his land as all the manufacturers get for all the products used to build the house—lumber and sheathing and roofing and flooring and plumbing and heating and cooling and all. The land speculator is public enemy No. 1 for the home builder and the home buyer. And too many appraisers are aiding and abetting him.

Says Professor Mason Gaffney of the University of Missouri: "Today's suburban land prices are predicated on an artificial scarcity, maintained by holding off the market vastly underestimated quantities of land in anticipation of vastly overestimated future demands."

In other words, today's land prices are based on a shortage that does not exist. New roads and faster transportation are making new lands accessible far faster than new families are forming to use these lands, and even close-in more land is available than we can build on in our generation.

We worry about land for a population of 200,000,000. But how many of us realize that a population of 200,000,000 could be housed with no more population density than the model village

of Winnetka, Illinois, inside 32 circles each with a 22-mile radius. We think that suburban land is getting scarce, but in 1955 the Regional Planning Association found only 21% of the suitable land in the New York Metropolitan area was developed for urban or suburban use (as distinct from rural or exurban use); even in the biggest city's biggest borough of Brooklyn only 56% of the suitable land had been developed. Across the country in supposedly crowded San Francisco the water resources board found 23% of the usable land on the bay side of San Mateo County (often hastily described as "a solid mass of suburbs") was still undeveloped, and around booming San Jose where the checker-board pattern of suburban sprawl is blighting 170 square miles of California's finest fruit land, the builders have actually used only 9 square miles for their tracts, leaving 161 square miles to go. Around Los Angeles, where prices are so high that home buyers drive 40 miles to find cheap land, the water resources board found 65% of the suitable land inside still undeveloped in 1955, and the geographic center of America's third biggest city is still being farmed by a land speculator who is holding it off the market in the expectation of getting a still higher price a few years from now.

As for Florida, more lots are already being developed there than the present astronomical rate of population growth can absorb before 1980.

Today's fancy land prices are all very well as long as the illusion of scarcity can be preserved, as long as everyone thinks the land he pays too much for today can be sold for a still higher price tomorrow. But what will happen when the inevitable day comes when prices can go no higher and the speculators rush to cover?

Perhaps some of you are old enough to remember what happened in the stock market in 1929, when stock prices soared and soared, not because their value was growing but because each buyer thought he could re-sell in a few weeks for a still higher price. In September 1929 Columbian Carbon issued rights to buy more of its stock for about \$250 a share and my wife put in an order to exercise her rights. When the crash came I thought I was very smart when I picked up the shares for her in the market for \$165. I thought I was

smart until I found that Columbian Carbon had closed that day at \$120. And I felt a lot less smart when the price kept dropping until it fell below \$30. I still own those shares as a reminder that most things that go up eventually come down again.

Today's fantastic land prices would be impossible if you appraisers were not aiding and abetting the inflation by reflecting these sky high prices in your appraisals. I wonder how you will feel about your part in letting this bubble get so inflated after the bubble has burst.

And now, I have some questions to ask you on behalf of the mortgage lenders.

The lenders are your principal customers. They tie up their money for 20 and sometimes 30 years on the basis of your appraisals, so they are much more concerned with tomorrow's value than with today's price; they are much more concerned with knowing what a wise buyer would pay for the house and lot 20 years from now than in being told what the property would sell for today.

Are you appraising for tomorrow's market, or for today's market, or for yesterday's market? Are you reserving your highest valuations for the kind of houses people are likely to want to live in in the vastly different world of 1980 when the average family will have a bigger income (in constant dollars) than junior executives made right after this last war? Or, are you looking backwards and giving your highest valuation to the kind of houses and the price-class of houses that proved the best mortgage risk in yesterday's market?

Three years ago the best informed housing expert in official Washington warned us all that America would soon face a glut of cheap housing. Says Armel Nutter, "In most markets the demand for more low-priced new houses is giving way to a greater trade-up market for quality homes." And, now Economist Colean has filled in the figures for us from the Census Bureau's housing inventory. Says Economist Colean: "Even if we had stopped building any cheap houses at all three years ago, we would already have 9,400,000 more reasonably-good housing units priced under \$12,400 than we will need in 1970 (not counting 5,000,000 substandard units that should be taken off the market as soon as possible). But by FHA income

requirement standards the next decade will offer us a potential market for:

3,300,000 more homes priced from \$12,400-\$14,200;

5,200,000 more houses priced from \$14,200-\$17,500;

6,000,000 more houses priced from \$17,500-\$23,600;

9,970,000 more houses priced over \$23,600.

"In other words, today's mass market is the quality house. The shelter shortage is over. America already has far more low-priced housing units than families who cannot qualify FHA to buy something better. And the whole net population increase in the Sixties will be families who could qualify FHA to pay at least \$17,500 for a quality house."

Are you reflecting in your valuations this tremendous change in the market for housing that is sure to come long before today's mortgages based in your appraisals are paid off?

And finally, I have a question to ask on behalf of the entire housing industry.

Will your appraisals hasten or delay, encourage or obstruct, the transformation of home building from an ancient and wasteful handicraft to a modern assembly-line industry?

The waste of labor and the waste of money for on-site fabrication is too great to continue. Anything and everything can be made better and cheaper in a factory, so tomorrow's house will be built with parts instead of pieces—factory fabricated parts sized to standard dimensions so they will fit together and work together with a minimum of wasteful on-site labor.

Tomorrow's house will be built to standard dimensions, and any house that does not fit those standard dimensions will cost too much to maintain. And tomorrow's house will look very different.

At long last the housing industry is entering the industrial revolution, and with that revolution home building has a chance to become America's biggest growth industry. For two generations, the housing industry has had the pants sold off it by other industries competing more efficiently, more concertedly, and more aggressively for the consumer dollar. Now industrialization will give home building its chance to catch up.

How soon and how fully home building can seize this opportunity will depend in large measure on whether you appraisers help or hinder the transformation of the industry.

Industry news

Appliance and accessory revisions approved by ASA

REVISIONS and additions to 21 appliance approval and accessory listing standards were recently approved as American standards by the American Standards Association. These revisions were previously adopted by the ASA Sectional Committee, Z21, of the A. G. A. Approval Requirements Committee.

The new industry standards will be effective January 1, 1961. Gas equipment manufacturers desiring to have their units tested by the A. G. A. Laboratories for compliance with the provisions may do so any time in advance of the effective date.

In the domestic appliance field the revised provisions pertain to gas-fired air conditioning units of the absorption type, boilers, vented recessed heaters, room heaters, incinerators, clothes dryers, domestic ranges—both free-standing and built-in cooking units, refrigerators, duct furnaces, unit heaters, and gas water heaters. In the commercial field the revised standards apply to hotel and restaurant ranges, portable baking and roasting ovens, deep fat fryers, and gas-fired counter

appliances. In the accessory field the revisions apply to manually operated gas valves, metal connectors for gas appliances, and domestic gas conversion burners.

In 1961 the approval requirements for gas water heaters will be available as three separate publications. Volume I will cover water heaters of the automatic storage type having input ratings less than 50,000 Btu per hour. Volume II will continue to cover side-arm-type water heaters having input ratings of less than 50,000 Btu per hour. Volume III will apply to circulating tank heater, instantaneous heater, and storage-type water heaters rated at 50,000 Btu per hour and more. It is believed more equitable testing procedures for each type will result through the issuance of the provisions for water heaters in three publications.

Provisions contained in Volume III will permit approval of applicable water heaters for installation on non-combustible flooring when desired by the manufacturer. Heretofore, all water heaters were required to comply with limits on floor temperatures.

Automatic storage-type water heaters, with ratings from 50,000 to 95,000 Btu per hour, inclusive, will be required under the provisions contained in Volume III to meet the current daily heat quota requirement; but those rated above 95,000 Btu per hour will be required to have a minimum thermal efficiency of 70 per cent and a stand-by loss not exceeding 10 per cent.

The text of Volume III also permits automatic water heaters to have an outlet water temperature of 190°F. This temperature was deemed necessary since many health and sanitation codes require the temperature of water for dishwashing in commercial establishments to be at least 180°F. at the point of use.

Under the revised provisions for domestic gas ranges, both free-standing and built-in

types, the manufacturer is permitted to select top-burner input ratings. This will accommodate the manufacturer whose design at lower input rates (but with good performance at high efficiencies) will release less heat to the kitchen and permit lower grades. Previously the approval requirements specified that the input rating of a regular top burner should not be less than 9,000 Btu per hour and for a giant top burner not less than 12,000 Btu per hour. Under the current provisions, the manufacturer is required to specify the burner input ratings on the marking plate attached to the appliance.

The new domestic gas range requirements also contain a complete rewriting of the electrical provisions for the purpose of clarification and to bring the provisions up to date. The text also contains provisions to cover the testing of domestic gas ranges designed for installation in trailer coaches and mobile homes.

A completely new text for domestic refrigerators using gas fuel will become effective January 1, 1961. It has been expanded to include a considerable number of tests simulating service conditions.

An addition to the requirements for hotel and restaurant ranges covers the testing of open-top broilers that are used extensively in steak houses. These requirements parallel similar ones for domestic units but take into consideration the increased operating time and the abuses that are common with commercial cooking equipment.

Copies of these new American standards are expected to be available near the end of 1960. A complete list of the American standards pertaining to the approval, listing, and installation of gas appliances and accessories may be obtained from A. G. A. Laboratories, 1032 East 62nd St., Cleveland 3, Ohio.

Florida victims of Donna receive uninterrupted natural gas service

WHEN the 100- to 125-mile-per-hour winds of a hurricane designated as Donna by the U.S. Weather Bureau struck the East Coast in September, whole communities were

left without power or communication.

During the resulting chaos, a new source of energy—natural gas—was being tested. In coastal and central Florida, areas hard-hit by

the storm, the delivery of natural gas power was watched with keen interest.

In St. Petersburg, Fla., officials of the Houston Texas Gas and Oil Corporation waited anxiously during the 42 hours of the hurricane's stay. When Donna finally turned back to the Atlantic Ocean, previous claims that their pipeline was capable of withstanding severe attacks from the elements had been proved. Without exception, customers normally receiving natural gas through the corporation's metering stations had received gas without interruption—all the way from Panama City to Miami.

In the central area of the state, where Central Florida Gas Corp., Winter Haven, Fla., has been receiving natural gas since 1959, homeowners and businesses found that their decorative gas lamps burned steadily throughout the hurricane. LaMond's Restaurant in Winter Haven, which had installed 14 Arkla gas lights around its parking lot and at entrances, remained well lighted. Although company service crews stood by for possible emergencies, the residential, commercial, and industrial customers of Central Florida Gas received natural gas for cooking, water heating, and refrigeration, without a single service interruption.



Two men struggle to remove wreckage strewn in the wake of Hurricane Donna in St. Petersburg, Fla., where trees were felled, power poles splintered, highways torn up, and large areas flooded

Dilling
H. G.
has been
Gas As
and oth
ber 23,
meeting
gavel
T. Luck
Also
Bailey,
ing and
S. L.
manage
vice pr
troller,
Elect
O. Ma
ural G
for Co
pre-ide
The
year fo
associa
vice pr
Natura
chairm
Tota
about
Lieuten
spectro
Davis,
turers
of Ari
Arizon
Nash,
Missile
of rese
Soyre,
Sales
world
Wis
address
said, 'and n
just 10
yardsti
in nee
NIGA
W D
recentl
Gas A
Pete
Dickin
from
memb
went
and F
greate
Oth
Hugh
vice p
Comp
E. M
secret
Oth
James
McElr
W. J.
and R

Dillin is president of PCGA

H. G. DILLIN, executive vice president of San Diego Gas and Electric Company, has been named president of the Pacific Coast Gas Association for 1960-1961. Mr. Dillin and other new officers were installed September 23, 1960, at the association's 67th annual meeting in Phoenix, Ariz. The president's gavel was presented to Mr. Dillin by Walter T. Lucking, outgoing president.

Also elected as officers were William J. Bailey, president, Day and Night Manufacturing and The Payne Co., first vice president; S. L. Sibley, vice president and general manager, Pacific Gas and Electric Co., second vice president; and L. W. Coughlan, controller, Pacific Gas and Electric Co., treasurer.

Elected directors for two-year terms were O. Marshall Jones, president, Cascade Natural Gas Co.; Walter S. Lee, president, Major Controls Co.; and H. A. Proctor, vice president, Southern California Gas Co.

The coveted Basford trophy, awarded each year for top achievement by a section of the association, was presented to James F. Gary, vice president of operations, Washington Natural Gas Co., for his work as general chairman of the PCGA operating section.

Total attendance at the convention was about 700. Delegates heard addresses by Lieutenant General Joseph F. Carroll, Inspector General, U. S. Air Force; Wendell C. Davis, president, Gas Appliance Manufacturers Association; Paul Fannin, Governor of Arizona; George F. Senner, Jr., chairman, Arizona Corporation Commission; John P. Nash, director of research, Lockheed Space Missile Division; D. T. MacRoberts, director of research, United Gas Corporation; Judson Sayre, chairman, board of directors, Norge Sales Corp.; and John Furbay, director, air world education, Trans World Airlines.

Wister H. Ligon, president of A. G. A., addressed the meeting on September 22. He said, "If an industry that doubles its sales and nearly triples its plant investments in just 10 years is a dying business, then the yardsticks for measuring growth are sadly in need of recalibration. . . ."

NGA elects Williams

DANIEL WILLIAMS, vice president of the New Jersey Natural Gas Co., was recently elected president of the New Jersey Gas Association at its 45th annual meeting.

Peter Sammartino, president of Fairleigh Dickinson University, and recently returned from a trip around the world, told the 400 members at the meeting that everywhere he went he had found conflict between the U.S. and Russia and China. He added that the greatest danger is in the economic field.

Other officers elected by the association are Hugh Wathen, South Jersey Gas Co., first vice president; Calvin R. Carver, City Gas Companies, second vice president; and Ralph E. Martin, New Jersey Natural Gas Co., secretary-treasurer.

Other speakers at the day-long session were James F. Simes, Ebasco Services; W. Dale McElroy, The United Gas Improvement Co.; W. J. Chappell, Bryant Manufacturing Co.; and Robert H. Quayle, Norge Sales Corp.

Promote gas dryer sales with three miles of wash



Michigan Consolidated Gas Co., Detroit, Mich., recently filled a Detroit stadium with 7,000 pieces of laundry to dramatize the amount of work involved in hanging up a year's wash for a family of four. Geraldine Scott, the current Mrs. Michigan, contemplates the flapping extravaganza

Khrushchev recommends gas to end air pollution

SOVIET Premier Nikita S. Khrushchev has suggested that the City of New York can end air pollution by switching to gas, according to the *New York Herald Tribune* of September 20.

Arriving in New York to attend sessions of the United Nations General Assembly, Premier Khrushchev told Henry Holle, med-

ical officer in charge of the U.S. Public Health Service Quarantine Station on Staten Island, that there was much too much smoke in New York harbor.

Mr. Khrushchev said that the Soviet Union was overcoming its smoke problems by taking advantage of odorless and smokeless gas as a fuel.

Luxury Ohio apartments are gas-heated, -cooled

CARLTON HOUSE, a \$2 million luxury apartment house newly opened in Akron, Ohio, has attracted national attention as a model of apartment house architecture and has gained additional attention because of its gas air conditioning installation. According to *Properties* magazine, widely distributed among apartment house owners, bankers, architects, and major property owners in northeastern Ohio, the completion of Carlton House marks the largest utilization of individual gas air conditioning units in a single apartment house.

Fifty-four three-and-a-half-ton Arkla-Servel units and four five-ton models provide summer cooling and winter heating for each of 60 suites in the building. The Arkla units were chosen, according to Matthew J. Rosenstock, designer of the building, because they best fit all specifications.

The Arkla equipment not only can supply both heating and cooling, but also can be controlled thermostatically from each apartment. Because the concrete-and-steel building is of lightweight construction, Mr. Rosenstock and his associates shied away from any installation that would include large compressors and the accompanying vibration.

Gas cooling had another advantage. The use of gas for heating and cooking in the building was mandatory, and by using gas air conditioning, there was no need for the installation of costly heavy cable.

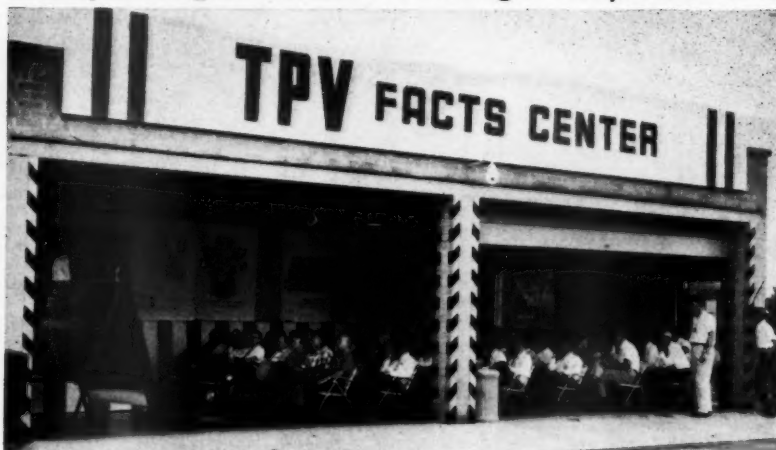
A special venting design for the Carlton

House gas air conditioners provided for venting stacks that were installed in mechanical service cores extending from the base of the structure through the roof. These cores also carry plumbing risers, electrical and telephone conduits, roof drains, and supplementary exhaust venting for the utility rooms, kitchens, and bathrooms. The venting stack arrangement eliminated heavy or outside masonry construction for that purpose.



The East Ohio Gas Co., Cleveland, Ohio, provides fuel for Carlton House, a completely gas-heated, gas-cooled luxury apartment dwelling

Two-cycle engine to drive centrifugal compressor in a natural gas first



Pipeline officials learn how Columbia Gulf Transmission Company plans to use new Clark 4,000-bhp, model TPV gas engine to drive a centrifugal compressor on its pipeline. Over 100 executives attended demonstration of the industries' newest two-cycle engine in a week-long seminar

REPRESENTATIVES from leading gas transmission and engineering companies recently witnessed in action the natural gas industry's first combination of a two-cycle, V-type gas engine driving a centrifugal pipeline compressor. The demonstration, jointly sponsored by Columbia Gulf Transmission Co., Houston, Texas, and Clark Bros. division of Dresser Operations, Olean, N. Y., was held at the station in Hampshire, Tenn.,

of Columbia Gulf's new automated pipeline.

The principal elements of the installation are a new Clark two-cycle, turbocharged, V-type gas engine, rated at 4,000 bhp and designated as model TPV; a 24-by-24-inch Clark centrifugal compressor; a Westinghouse speed-increasing gear of lock-train design.

Several firsts have been attributed to this combination. It is the first time a two-cycle engine has been teamed with a centrifugal

compressor on a natural gas pipeline. The combination marks the first in a series of large Clark two-cycle engines. (The initial unit, a 10-cylinder engine rated at 4,000 bhp will be followed by 12- and 16-cylinder machines, rated at 4,800 and 6,400 bhp, respectively.) It is the first application of the Clark centrifugal compressor with an engine driver. (It has been in use for nine years with gas turbine and electric motor drivers.) It is the first use of a gear of this configuration in natural gas transmission.

The installation presently runs on local automatic controls but is designed ultimately for completely unattended operation by remote control from Nashville, Tenn.

A partial list of companies present at the demonstration includes El Paso Natural Gas Co., Texas Eastern Transmission Corp., Transcontinental Gas Pipe Line Corp., Pacific Lighting Gas Supply Co., American Louisiana Pipe Line Co., Panhandle Eastern Pipe Line Co., Northern Natural Gas Co., Natural Gas Pipeline Company of America, Commonwealth Natural Gas Corp., Mississippi River Fuel Corp., Texas Gas Transmission Corp., Phillips Petroleum Co., Cities Service Gas Co., Colorado Interstate Gas Co., Southern Natural Gas Co., Houston Pipe Line Co., The Columbia Gas System, The East Ohio Gas Co., The Ohio Fuel Gas Co., United Fuel Gas Co., Arkansas Louisiana Gas Co., Pacific Gas and Electric Co., New York State Natural Gas Corp., and The Manufacturers Light and Heat Co.

Highlights of cases before the Federal Power Commission

Bureau of Statistics, American Gas Association

Certificate cases

● Atlantic Seaboard Corp. has been authorized in a decision filed by Examiner Purdue to construct natural gas facilities costing about \$1.9 million. The facilities will include 20.8 miles of loop lines in Maryland and Virginia to be used to meet increased requirements of existing customers during the 1960-1961 winter.

● Coastal Transmission Corp. has filed a budget-type application seeking authorization to construct facilities as required to attach new supplies of natural gas when available. The total cost of all facilities will not exceed \$1.5 million, with single projects limited in cost to \$300,000.

● Colorado Interstate Gas Co. has been granted temporary authority to build its proposed 4,500-horsepower Rawlins compressor station at an estimated cost of nearly \$1.8 million. This station will provide increased service to customers in the Rocky Mountain area.

● Michigan Wisconsin Pipe Line Co. has received authorization to expand its transmission system at an estimated cost of \$44.8 million to increase daily sales capacity by 100 million cubic feet of natural gas per day. This project includes 530 miles

of pipelines to parallel existing lines in Illinois, Kansas, and Michigan; 37 miles of loop lines in Wisconsin; and an additional 6,000 horsepower to be installed in two Kansas compressor stations. The additional supply of gas will come from the Laverne field in Oklahoma and will meet the increased demands of present customers in Illinois, Iowa, Michigan, Missouri, and Wisconsin.

● Northern Natural Gas Co. has received an amended certificate of authorization deleting or revising portions of an expansion program from an original cost estimate of \$114.6 million to a revised estimate of \$101.5 million. The natural gas facilities previously authorized were designed to enable the company to begin natural gas service in 342 communities in Minnesota, Iowa, Wisconsin, South Dakota, Nebraska, and Illinois. Twenty-six communities will not receive service because the distribution companies involved would not make contributions to construction costs as required by the commission. Another 18 communities will not be served because the proposed supplier, Iron Ranges Natural Gas Co., failed to meet conditions of the commission's original order. In other certificate cases the company has been temporarily authorized to construct \$1.4 million in natural gas facilities to enable it to withdraw 100

million cubic feet of natural gas daily from the St. Peter-Elgin portion of the Redfield storage area in Iowa and to build its proposed Highland gathering system at an estimated cost of \$1.6 million.

● Southern Natural Gas Co. has filed a budget-type application proposing to construct natural gas facilities as needed to connect newly purchased supplies to its system when available. The over-all cost of these facilities will not exceed \$3 million, and each project will be limited to \$500,000 in cost.

● Washington Gas Light Co. has filed an application for authority to construct a total of about 16 miles of new pipeline in the Washington metropolitan area to meet the increasing demand for natural gas. These facilities, estimated to cost \$3.8 million, include the conversion of an existing five-mile distribution line in the Alexandria area to a transmission line.

Rate cases

● Kansas-Nebraska Natural Gas Co. has had its proposed \$650,125 or 19.9 per cent annual wholesale rate increase rejected by Examiner Zwerdling in a decision subject to review by the commission. The entire increase, collected since October 1, 1957,

must be refunded with interest at six per cent. The requested 6.7 per cent rate of return was denied and a return of 6.35 per cent allowed. The examiner adopted the system-wide method for allocating costs between jurisdictional and non-jurisdictional sales and rejected the company's mileage method.

• **Kentucky Gas Transmission Corp.**, in settlement of three rate cases recently approved by the commission, must refund a total of \$1,143,874, with interest at six per cent. The first increase—for \$2,380,000 per year—was in effect from July 14, 1957, through April 6, 1959; the second, totaling \$1,721,400 per year, from April 7, 1959, through May 14, 1959; and the third, amounting to \$878,000 per year, from May 15, 1959, through April 4, 1960. A further increase of \$3,649,700 per year not affected by the settlement went into effect April 5, 1960, and is being collected, subject to refund, from the 12 wholesale customers of the company in Ohio and Kentucky.

SUMMARY OF INDEPENDENT GAS PRODUCER RATE FILINGS—JULY, 1960

	Number	Annual Amount
Tax rate increases allowed without suspension	2	\$ 5,230
Other rate increases allowed without suspension	14	61,577
Rate increases suspended	72	900,207
Total rate increases	88	967,014
Tax rate decreases allowed without suspension	—	—
Other rate decreases allowed without suspension	1	1,538
Total rate decreases	1	1,538
Total rate filings (all types)	723	—
Total rate filings acted on from June 7, 1954, to July 31, 1960	48,329	—
Rate increases disposed of after suspension (during July, 1960)	40	325,448
Amount allowed	—	307,120
Amount disallowed	—	—
Amount withdrawn	—	18,328

Rate increases suspended and pending as of July 31, 1960

3,357 \$170,384,678

• In other FPC actions, The Columbia Gas System has been authorized to segregate its Maryland distribution and transmission properties. The Cumberland and Allegheny Gas Co. will retain its transmission lines and sell its distribution system to the Columbia Gas Co. of Maryland. In a further corporate realignment step, application has been made for The Manufacturers Light and Heat Co. to sell its distribution properties to a new affiliate, the Columbia Gas Co. of Pennsylvania. Manufacturers Light and Heat will retain its producing and major transmission facilities.

• **National Fuel Gas Co.** in a corporate simplification move has applied for permission to sell the facilities of Penn-York Natural Gas Corp. to another subsidiary, Iroquois Gas Corp. The Penn-York Natural Gas Corp. is both a transporter and a wholesaler of natural gas.

Gas companies praise results of 'Easy Living' shopping center campaign

REDBOOK magazine's 1960 "Easy Living" campaign, a suburban promotion conducted at 50 of the nation's largest shopping centers, closed recently with reports of outstanding results from gas companies all over the country. A. G. A. was among 70 of *Redbook's* advertisers to participate in this campaign designed to demonstrate new, modern time- and money-saving products and services, including modern gas appliances, that American industry has brought to the consumer.

According to *Redbook's* field staff, which assisted A. G. A. members, local utilities participated in about 23 centers located in the country's major market areas. The pro-

motion, which ran from March through September, 1960, was developed for the readers of the popular mass magazine—the young suburban families who are the best customer; of shopping centers.

For the campaign A. G. A. arranged with *Redbook* to make available to local gas companies free space in the heavy-traffic mall areas. Each company was supplied with a kit of promotional material that included advertising and publicity ideas, suggested events and activities to dramatize displays and demonstrations, and other materials keyed to the over-all Easy Living theme. A special A. G. A. theme was also presented—"A World of Easy Living with Gas."

A wide variety of techniques was used to promote gas. They included demonstrations, demonstrator-model sales, gas barbecue cook-outs, model home and model kitchen displays, and gas light prizes for a national "Typical Young Adult Couple" contest.

Redbook has received many enthusiastic letters about the campaign from utilities. A typical one from Neal Hall, director of publicity and advertising, Lone Star Gas Co., Dallas, Texas, said, "... there is no better way to familiarize the general public with new and improved gas appliances. . . . As a utility, we are interested in this opportunity to tie in several gas appliance dealers into one impressive exhibit."

Northern Natural forms propane subsidiary; P. A. Gass appointed president

NORTHERN Natural Gas Co., Omaha, Nebr., has announced the formation of a new wholly owned subsidiary, Northern Propane Gas Company. The new subsidiary will develop retail propane markets in the northern plains area, bringing propane gas to rural and suburban areas not within economic reach of natural gas pipelines.

P. A. Gass has been appointed as president

of the new subsidiary. Mr. Gass is also a senior vice president of the parent company. Other officers of the new subsidiary who are also officers of the parent company include John Merriam, chairman of the board; H. H. Siert, treasurer; and B. H. Harper, secretary.

R. K. Albon, former vice president of marketing for the National Propane Company of New York, has joined Northern Propane as

vice president.

Mr. Gass has announced the purchase of Blaugas Company of Omaha and Cygas Corporation, with facilities in Neligh, Nebr., and Sargent Bluffs, Iowa. Northern Propane also recently acquired other retail properties in Iowa, including Bottled Natural Gas Company and the propane properties of Blockton Oil Company.

Gas Industry Campaign Calendar is among A. G. A. publications for October

STATISTICS

- Quarterly Report of Gas Industry Operations, First Quarter, 1960. By subscription, \$1 per year. Cat. no. 64/S-1.
- Gas Facts, 1960 edition. Contains data for 1959. First five copies, \$3 each; additional copies \$1.50 each. Cat. no. 71/S.
- Monthly Bulletin of Utility Gas Sales, June, 1960. By subscription, \$1 per year. Cat. no. 60/S 6.

PROMOTION

- 1961 Gas Industry Campaign Calendar.

\$1. Cat. no. 85/P.

- 1961 A. G. A. Water Heater Display. \$6.50. Cat. no. 84/P.

ACCIDENT PREVENTION

- Employee Accident Experience of the Gas Industry—1959, by the A. G. A. Bureau of Statistics. To members—one copy, free; two to 50 copies, 25 cents each; 51 to 99 copies, 15 cents each. To non-members—25 cents each. Cat. no. 33B/AP.
- How Injuries to Gas Men Might Be

Avoided, Volume X, September, 1960, Issue Three, by the Accident Prevention Committee. Accident case histories. To members—one copy, free; two to 50 copies, 10 cents each; 51 to 99 copies, seven cents each; 100 to 500 copies, five cents each. To non-members—10 cents each. Cat. no. 43c/AP.

RESEARCH

- Pipeline Research—1960. Free. Cat. no. 35/PR.

'Times' reprints requested

REPRINTS of the article in *The New York Times* criticizing an advertising campaign of the electric industry, quoted in the September issue of the MONTHLY, were recently sent to members of A. G. A. and have attracted considerable attention. One result has been a request from T. N. Martin, general sales manager of Florida Public Utilities Co., West Palm Beach, Fla., for 20,000 additional copies of the article for distribution to the utility's customers.

Engineers at C. W. Fuelling, Inc., given medals for leak prevention method

THE FRANKLIN Institute, Philadelphia, Pa., will award Walton Clark medals to two engineers from Decatur, Ind., who devised a process to seal and prevent leaks in gas mains.

Robert W. Cook, vice president of C. W. Fuelling, and Lee F. McBride, a staff member

New editions Gas Facts, Gas Data Book published

A. G. A. has announced that it has available for distribution copies of the 1960 editions of *Gas Facts* and the *Gas Data Book*.

Gas Facts presents comprehensive information on all phases of gas industry operations during 1959 and earlier years. Included is tabular material on energy reserves, natural gas production, exploratory and developmental drilling, transmission and distribution, underground storage facilities, customers sales and revenues, appliance shipments, new

security issues, financial results, construction expenditures, employees and payroll, the cost of gas and other competitive forms of energy, and a review of the Canadian gas industry. *Gas Facts* is \$3 the copy for the first five copies and \$1.50 for each additional copy.

The *Gas Data Book* is a pocket-size summary of important highlights presented in *Gas Facts* and is available at 50 cents for the first copy and 25 cents each for additional copies.

of the firm, will be honored at formal ceremonies on October 19, 1960.

Gas mains usually have joints packed by jute. Manufactured gas contains enough moisture to expand the jute and keep the joint tight. With natural gas much of this moisture is lacking; the jute does not expand,

and leaks develop. In the Fuelling method first used in 1953, Mr. Cook invented the electronic sensing device that locates the joint in gas mains with internal diameters from eight to 24 inches. He and Mr. McBride developed the applicator that paints the joint with a sealer.

New legislation authorizes private, long-term helium-purchase contracts

SECRETARY of the Interior Fred A. Seaton recently outlined plans of the Department of the Interior for implementing the long-range helium conservation program authorized by legislation signed on September 13, 1960, by President Eisenhower.

The program is designed to save for fu-

ture use about 52 billion cubic feet of irreplaceable helium, a vital defense element, now being wasted in fuel gas, according to Secretary Seaton. He pointed out that the new legislation replaces the Helium Act of 1937 and authorizes the Secretary to enter into long-term helium purchase contracts with

private industry.

Under the program the government would contract to buy crude helium for periods not to exceed 25 years from plants financed, constructed, operated, and maintained by private industry. Prices paid for helium delivered to the government would be negotiated and would assure participating companies of recovering fixed costs, plus payment for the volume of helium delivered.

Secretary Seaton said that the new legislation would encourage private industry to enter into contracts with the government to extract helium from helium-bearing natural gas. However, firms not choosing to enter into such contracts are not precluded from extracting and selling helium on the open market. The new legislation requires Federal agencies to obtain their supplies of helium from the government.

Firms interested in submitting proposals or obtaining additional information may do so at the Office of the Assistant Director—Helium, Room 4627, Department of the Interior, Washington 25, D. C., and the Office of General Manager, Helium Operations, 514 Barfield Building, Amarillo, Texas.

Norcold to produce compact gas refrigerators

NORCOLD, Inc., Los Angeles, Calif., manufacturer of compact gas-electric and gas refrigerators has announced its entry into the field of the production of refrigerators for hotels, motels, multiple-dwelling units, and executive offices.

Particular attention is being focused on supplying information on the new built-in and console models to the gas appliance community.

Norcold, long the major supplier of com-

pact refrigerators to the travel trailer industry, recently began supplying gas association members in all localities with specifications and availabilities of the four- and six-cubic-foot free-standing and built-in models.

Many pilot installations have been made in private homes in various parts of the country. Most such installations were designed to fill a need for a second smaller refrigeration service in family rooms, outside living areas, and bars.



Norcold, Inc., has met the current American demand for the compact with space-saving compact refrigerators like these built-in and free-standing models, which are four and six cubic feet in size

Schedule corrosion meetings

PIPELINE corrosion engineers will gather at three regional conferences this fall to hear technical papers and to participate in technical committee work on the control of corrosion. The conferences, sponsored by regions of the National Association of Corrosion Engineers, Houston, Texas, are to be held as follows: Southeast Regional Conference, Atlanta, Ga., October 6 through 8, 1960; Northeast Regional Conference, Huntington, W. Va., October 11 through 14, 1960; South Central Regional Conference, Tulsa, Okla., October 25 through 27, 1960.

NACE technical committee sessions on prefabricated plastic film for pipeline coating will be held at Tulsa and Huntington.

More information may be obtained from the National Association of Corrosion Engineers, 1061 M and M Building, Houston 2, Texas.

Personal and otherwise

Ashby joins Norge as director of engineering

CARL T. ASHBY has been appointed director of engineering for Norge refrigerators and home freezers at the Norge division of Borg-Warner Corp., Chicago, Ill. Mr. Ashby resigned as president and director of engineering of Conrad, Inc., environmental test equipment manufacturer, Holland, Mich., to join Norge.

Holder of the degree of doctor of philosophy in physical chemistry and of several U. S. patents, Mr. Ashby had been president of



C. T. Ashby

Cushman becomes president of association class

JAC A. CUSHMAN, secretary and convention manager of A. G. A., has been appointed president of the second year association class attending the Institute for Organization Management at Syracuse University.

More than 1,200 association and chamber-of-commerce executives have attended the 1960 Institutes for Organization Management, which are designed to help trade associations play a more effective role in American life. Classes were held at six leading universities under sponsorship of the U.S.

Chamber of Commerce and the American Society of Association Executives.

The second year association course completed by Mr. Cushman featured intensive study of the following subjects: motivating group action, government relations, membership conservation, trade association statistics, group communications, association tax regulations, industrial regulations, educational activities, staff administration, public relations, the businessman in politics, and the sociology of leadership.

Commonwealth names Rolston

JOHN N. ROLSTON has been named business development representative for consulting and design engineering services by Commonwealth Associates, Inc., the professional engineering affiliate of Commonwealth Services, Inc., New York, N. Y. He will make his headquarters in Commonwealth's office in Jackson, Mich.

Mr. Rolston was formerly vice president in charge of the office in Chicago, Ill., of United Engineers and Constructors, Inc., and prior to that, was account manager in the field of consulting management engineering for Booz, Allen, and Hamilton. He has been active in the construction and heavy machinery industries since his graduation from the University of Illinois in 1930.

Conrad since March, 1956. Before that he was associated with Servel, Inc., Evansville, Ind., for 22 years, directing research, development, and engineering.

Humble elevates Haas

MERRILL W. HAAS has been appointed to the newly created post of vice president for exploration of Humble Oil and Refining Co., Houston, Texas.

Mr. Haas has been a vice president and member of the board of management of Humble's Carter division at Tulsa, Okla. In his new position he will be responsible to the board of directors for all exploration activities.

Arnold Herrmann, executive vice president, American Cast Iron Pipe, retires

ARNOLD J. HERRMANN, executive vice president of American Cast Iron Pipe Co., Birmingham, Ala., retired recently.

Mr. Herrmann's continuous service with the company dates from August 14, 1914, when he

was employed in the machine shop. He subsequently worked in the traffic and billing departments, laboratory, shipping department, and sales department. His longest service was in the sales department.

In 1952 he returned to Birmingham as assistant-general sales manager, a post he held until the following year, when he was elected vice president in charge of sales. In 1955 he was elected executive vice president.

Stone and Webster elects Merrill vice president and financial consultant

EUGENE S. MERRILL has been elected a vice president and financial consultant of Stone and Webster Service Corp., New York, N. Y.

Mr. Merrill comes to Stone and Webster from Standard Research Consultants, a subsidiary of Standard and Poor's Corporation,

where he had been executive vice president since 1944. Previously he had served Standard and Poor's for 10 years as editor of its bond advisory service, as investment expert in public utility securities, as field investigator, and as a member of the bond rating committee. For three years he was assistant treasurer of

Wickwire Spencer Steel Company.

He is a graduate of Stanford University and the graduate school of business administration at Harvard University. For four years following graduation, he was an accounting instructor and research analyst at Harvard and a lecturer at Northeastern University.

Clark Belden honored for outstanding service at ASAE annual meeting

AT THE recent 41st annual meeting of the American Society of Association Executives at French Lick, Ind., Clark Belden, managing director since 1932 of the New England Gas Association, Boston, Mass., was among 16 members of the society to receive an award for outstanding service.

The French Lick awards were the first that the society has made to individual members. Previous awards were made to associations. Four persons received awards in each of four association categories, including large national, small national or regional, state, and local or metropolitan. NEGA is in



C. Belden

the category of regional associations.

Mr. Belden's background with ASAE includes the writing of nine articles since 1939, with a total of 65,000 words for its journal; three years as a director; chairmanship of its public relations committee for two years; and presidency of the Boston chapter. He has been a member of ASAE for 26 years. He has also long been active in the Public Relations Society of America, where he has been eastern regional vice president, a director for seven years, and president of the New England chapter.

He has served on many committees of ASAE, PRSA, A. G. A., the New England Council, and the National Industrial Council of New York. From 1953 to 1955 he served on the Public Relations Advisory Committee of the U.S. Chamber of Commerce.

Mr. Belden has lectured or conducted

seminars on public relations and on trade associations at the Massachusetts Institute of Technology, the Harvard School of Education, the Harvard Business School, and the School of Public Relations and Communications of Boston University. He has been a member of the faculty of four trade association institutes at Northwestern and Yale Universities. He was a trustee of the latter institution for three years.

The jury for the awards at French Lick consisted of Stanley F. Teele, Harvard University; Alfred L. Seelye, Michigan State University; and William T. Jerome III, Syracuse University.

Mr. Belden was the only award recipient from New England among the Society's 2,100 members throughout the country. There are about 15,000 trade association executives in the U.S., with about 100 in New England.

To manage exploration

W. J. WOOTEN has been elected vice president and manager of exploration for Texas Gas Exploration Corp., Houston, Texas.

Mr. Wooten formerly was manager of the corporation's land department. In his new position he is responsible for general supervision of both its land and geological departments.



W. J. Wooten

Two named in Virginia Electric and Power promotions

CHARLES S. BETTS, JR., Potomac district manager of the Virginia Electric and Power Co., Alexandria, Va., has been appointed assistant to the president of the company at Richmond, Va.

Replacing Mr. Betts at Alexandria will be Leon D. Johnson III, assistant district manager of the Richmond district. Mr. Johnson's present position will be abolished.

Mr. Betts was graduated from Virginia Military Institute in 1933, with a degree of bachelor of science in electrical engineering. After graduation he joined Virginia Electric and Power and served in engineering capacities before being appointed to the position of

assistant superintendent of transmission in 1941.

He rose from superintendent of transmission at Petersburg, Va., in 1946 to Potomac district manager in 1957.

Mr. Johnson has been with the company since 1939. He was graduated that year from Virginia Polytechnic Institute, with a degree of bachelor of science in electrical engineering. He briefly filled several engineering positions before entering the U. S. Navy in 1942. He rejoined the company in 1945. He was appointed chief design engineer in 1957 and assistant Richmond district manager in July, 1960.

Names in the news—a roundup of promotions and appointments

UTILITY

Northern Natural Gas Co. has announced several promotions and transfers of personnel in gas purchase operations. **David Lage, Jr.**, has become supervisor of clerical service. He has been with the company since 1950 and was formerly a clerk in the gas supply department. **Harold Barrett** has been promoted to supervisor of operations. He joined Northern in 1947. His last position was that of gas engineer in Omaha, Nebr. **Wayne Brown** has been appointed gas engineer and has been transferred to the Omaha office. He had been a well test engineer at Hobbs, N. M., since 1958. **Orville Bruce Jones** has become well test engineer and has been transferred to Liberal, Kans. He was previously a field clerk. **James Welsch** has succeeded Mr. Brown at Hobbs. He began his career with Northern as a field draftsman.

James A. Elkins, Jr., and **J. Finley McRae** have been elected to the board of directors of United Gas Corp. After his graduation from Princeton University in 1941, Mr. Elkins joined the City National Bank of Houston, Texas. In 1950 he was elected president and in 1956, when that bank and First National were consolidated, was elected president of the merged institutions. He is a director of Eastern Airlines. Mr. McRae is a director and president of The Merchants National Bank of Mobile, Ala. He is also a director of Alabama Power Co., and a member of the board of International Paper Co.

C. R. Rikel has been named manager for the northeast division of Southern California Gas Co. He has succeeded the late **Myron Thomas**. Mr. Rikel has served as executive assistant in the company's Los Angeles general office for the past two years. A graduate of Amherst College and the California Institute of Technology, he began his gas company career as an air conditioning engineer in 1946.

John V. Fratus has been appointed to the newly created post of director of employee relations at Hartford Gas Co. He was previously training coordinator for Connecticut Light and Power Co. A graduate of Brown University, he joined Connecticut Light and Power as a commercial sales representative.

Charles E. Terrell, who was superintendent of the measurement department of Southern Natural Gas Co., has retired. Active in the past on A. G. A. committees, Mr. Terrell has been named editor of the forthcoming *A. G. A. Measurement Manual* and will devote his time to that work.

John P. Roche, president of Heppenstall Co. since 1956, has been elected a director of The Columbia Gas System. A graduate in 1935 of Duquesne University and of the Pittsburgh Law School in 1939, he served in 1953 as the youngest president in the history of the Chamber of Commerce of Pittsburgh, Pa. He is a director of The Manufacturers Light and Heat Co.

MANUFACTURERS

Whirlpool Corp. has announced the advancement of several members of its sales staff. **B. D. Wiesman**, has been appointed sales promotion manager, RCA Whirlpool refrigerators and freezers—a post recently made vacant by the elevation of **Quentin B. Garman** to the position of national advertising manager. A graduate of the University of Omaha, Mr. Wiesman had been for six years sales promotion manager of Sidles Co., a distributor for RCA Whirlpool. **John G. Steeb**, former sales administrator for Whirlpool's international division, has been promoted to sales manager. He has succeeded **Gerald F. Southland**, who has joined Whirlpool International Bahamas, S.A., as sales manager for the newly established Eastern Hemisphere branch office. Mr. Steeb is responsible for sales and merchandising as administrative functions for the parent international operation in the U.S. He reports to **Roy Erikson**, manager of Whirlpool International, U.S.A. Mr. Southland will leave for Beirut, Lebanon, headquarters for the Eastern Hemisphere office, late this month. In addition to his distributor sales responsibilities in 28 of the major countries of Africa, Europe, and the Middle East, he will develop sales contacts with U.S. military buying offices throughout the European theatre. Mr. Steeb joined Whirlpool in 1952, the year of his graduation from Northwestern University. A graduate of Purdue University in 1950, Mr. Southland joined Whirlpool in 1951.

Joseph B. Ogden, vice president of marketing for the Airtemp division of Chrysler Corp., has resigned from the company to accept a sales position with a manufacturer in an unrelated field. No successor has been appointed.

Morris Sievert, who has served in turbomachinery sales with Solar Aircraft Co. for the past three years, has been appointed manager of turbomachinery sales for the company. He will manage sales of gas-turbine engines, compressors, and related equipment.

Arnold L. Buehl has been named director of engineering for the Hotstream Heater Co. Mr. Buehl attended Fenn College and prior to joining Hotstream five years ago was a test engineer with A. G. A. for three years.

Utility Appliance Corp. has appointed **Fred B. Hartney, Jr.**, as general sales manager for its Gaffers and Sattler product division. He has joined Utility after ten years' experience with the Frigidaire division of General Motors, where he most recently served as assistant to the national sales manager.

Donald P. Faulhaber has been appointed as an eastern sales representative for the Graydon Controls division of Robertshaw-Fulton Controls Co. He joined the firm in 1956 and has been with its international division since 1957.

OTHER

Monty G. Martin has been appointed manager, gas reserves, for Texas Gas Transmission Corp. Chief geologist since 1954, Mr. Martin has been with Texas Gas for eight years. In another development within the company, **Charles P. Moreton** has been appointed manager, gas contracts. He joined the company in 1953 as a supply contract representative. Prior to his new appointment he served as supervisor, gas contracts. Mr. Moreton holds a degree in civil engineering from Georgia Institute of Technology.

E. A. Dovenberg has become manager of natural gas development of United Petroleum Gas Co. He is responsible to **D. A. Larson**, vice president, assisting in the development of United's natural gas program.

M. A. Combs, former section secretary, passes

MAHLON A. COMBS, consultant with A. G. A., died suddenly September 5, 1960. He was 67.

Mr. Combs, who spent his entire career in the gas industry, retired as secretary of the A. G. A. Industrial and Commercial Gas Section in 1957 and was until his death a full-time consultant to A. G. A. on service manuals.

Following graduation from Stevens Institute of Technology, he joined New York's Consolidated Gas Company. Later he served as a captain in the U. S. Tank Corps during



M. A. Combs

World War I, after which he entered the fields of gas lighting, space heating, and industrial heating.

He joined A. G. A. in 1945 as assistant secretary of the Industrial and Commercial Gas Section, after service with the Maxon Premix Burner Company, as industrial equipment salesman; the American Radiator and Standard Sanitary Corporation, as district representative; and the American Gas Products Corporation as general sales engineer.

Mr. Combs became secretary of the section in 1946. During his 11 years in that position he initiated, among other projects, the successful industrial and commercial gas schools and helped to organize the A. G. A. Hall of Flame, of which he was a member.

He is survived by his wife, Lucy B. Combs; a sister; a son; and three grandchildren.



Mahlon Apgar Combs

former secretary of the A. G. A. Industrial and Commercial section and consultant with A. G. A., died suddenly on September 5, 1960, at his son's home in Connecticut. (Please see above.)

J. R. Woodfill

manager of industrial gas sales for Northern Indiana Public Service Co., Hammond, Ind., died recently at his home in Highland, Ind. He was 51.

He began his utility career with the Public Service Company of Colorado in 1931. After serving as a sales engineer for manufacturers in Toledo, Ohio, and Chicago, Ill., he joined Northern Indiana Public Service in 1938 as a cadet engineer in Hammond.

He was promoted to supervisor of power sales for the company's Calumet division in 1949. In 1953 he was named supervisor of Calumet division industrial sales—a post he held until 1957, when he became manager of industrial gas sales for the entire company.

During World War II, he rose to the rank of lieutenant colonel while serving in the European theatre. Mr. Woodfill was decorated numerous times and held the Bronze Star, with oak-leaf cluster; the *Croix de guerre*; Army commendation medal; and four battle stars.

Surviving are his wife, Helen; a son; a daughter; his mother; a brother; and a sister.

Samuel Ernest Linton

past president of the Nashville Gas Co., Nashville, Tenn., died August 10, 1960. He was 83.

Mr. Linton attended North Carolina College and was graduated from Roanoke College, where he was a member of Phi Delta Theta fraternity.

After serving in the Spanish-American War, he was associated with The United Gas Improvement Company. In 1916 he was transferred to the Nashville Gas and Heating Company as manager and about two years later became president. He served as president of the company until his retirement in 1945.

Mr. Linton was a founder and board chairman of the National Pencil Company and later became board chairman of the Linton Pencil Company.

Survivors include two sons, a daughter, two sisters, a brother, and nine grandchildren. His wife, the former Leontine Steensen, of Sioux Falls, S. D., whom he married in 1916, died in 1955.

Sergeant M. Foeller

superintendent of transportation, Michigan Consolidated Gas Co., Detroit, Mich., died September 1, 1960.

Mr. Foeller had long been active in committee work of the A. G. A. Operating Section. He contributed much to the work of the Automotive and Mobile Equipment Committee of the A. G. A. Operating Section and its subcommittees. He also served on the Operating Section's Managing Committee, A. G. A. Distribution Achievement Award Committee, and the Task Committee on Organization Study.

Robert H. Whipple

former assistant to the manager of the gas department of Philadelphia Electric Co., Philadelphia, Pa., died on August 18, 1960, at the seashore. He was 76.

Mr. Whipple, who retired in 1955 after 47 years with the company, began his utility career following graduation from the University of Illinois as a civil engineer. He was a registered professional engineer, a life member of the American Society of Civil Engineers, and had been active in affairs of A. G. A. and the Pennsylvania Gas Association.

He is survived by his widow, the former May Clark Sterrett, and a son, Robert S., an engineer in the construction division of Philadelphia Electric.



1960

NOVEMBER

- 14-16 • American Petroleum Institute, Annual Meeting, Chicago, Ill.
- 14-17 • National Hotel Exposition, New York Coliseum, New York, N. Y.
- 15-16 • Natural Gas Pipeline Institute, Court Room, Court House, Liberal, Kans.
- 18-22 • Air Conditioning and Refrigeration Institute, Annual Meeting, Hollywood Beach Hotel, Hollywood, Fla.
- 28-30 • A. G. A.-Edison Electric Institute Electronics Seminar, The Claridge Hotel, Atlantic City, N. J.

• American Society of Heating, Refrigerating and Air Conditioning Engineers, Semi-annual Meeting, Chase-Park Plaza Hotels, St. Louis, Mo.

DECEMBER

- 5-9 • A. G. A. Gas Air Conditioning Sales School, Nationwide Inn, Columbus, Ohio.

1961

FEBRUARY

- 9-11 • A. G. A. Home Service Workshop, Cleveland-Sheraton Hotel, Cleveland, Ohio.
- 13-14 • Second Biennial Mid-Pacific Gas Merchandising Conference, Hawaiian Village Hotel, Honolulu, Hawaii.
- 13-16 • American Society of Heating, Refrigerating and Air Conditioning Engineers, Semi-annual Meeting and Exposition, Chicago, Ill.
- 23-24 • A. G. A.-Pacific Coast Gas Association Public Relations Workshop, Benson Hotel, Portland, Ore.

Personnel service

SERVICES OFFERED

Electric Utility Rate Engineer—graduate electrical engineer, M.S. business management, experience: five years rate engineering, 12 years utility engineering consisting of design, construction and operations, NYC area preferred. (Age 38) 1996.

Gas Engineer—of major utility. Three years' diversified field and staff chemical engineering experience. Work includes: research, gas conditioning, analysis, etc. Married. Will relocate. Excellent knowledge of west. Detailed resume on request. 1997.

Industrial Sales Engineer—nine years' experience promoting the sale of industrial gas with established natural gas utility. Thoroughly familiar with boiler conversions, industrial process heating and commercial gas applications. Responsible, married, family, age 33. Degree in Mechanical Engineering. Resume and references upon request. 1998.

Management Engineer—graduate engineer with ten years experience with natural gas distribution company including administration, engineering, operating and construction phases. Age 35. Will relocate with utility or consulting firm. 1999.

Marketing Management—Product Development—twenty years sales executive, service management and administrative experience national GAMA membership corporation. Ten years wholesale distributor gas appliances assures knowledge dealer development and related promotional and merchandising activities. Currently marketing consultant. Seeking gas industry re-association offering challenging opportunity and growth potential. Will relocate. Salary open. 2000.

POSITIONS OPEN

Distribution Research Engineer—challenging position in organization and supervision of distribution research programs for the industry. Graduate engineer, under 35 years of age, five to 10 years experience, excellent knowledge all

phases distribution operations. Research experience with large gas utility preferred. Furnish resume of education, experience and salary requirements. 0943.

Testing—Development Engineer—California manufacturer of forced air central gas heating equipment seeks engineer capable of testing and development of forced air furnaces. Must be familiar with A. G. A. testing procedure. Interested candidates please submit resume of background and experience. All replies will be confidential. 0944.

Gas Engineer—midwest utility, 130,000 gas customers, seeks graduate engineer with three to eight years experience in gas distribution work including system design and layout, construction, and corrosion control. Excellent opportunity for advancement. Send resume of education, experience and salary requirements. 0945.

Corrosion Engineer—to head up and expand gas distribution corrosion control program. Please send complete resume of past experience, education and personal data. 0946.

Utility Property Accountant—\$7,176-\$8,580 annually. Responsibility for all property records including methods and procedures related to property records for city-owned utilities. Originate and supervise maintenance of catalogues for plant and retirement units, and general supervision of distribution of property accounts. Review property depreciation to ascertain that adequate reserves are maintained. College graduate with specialization in accounting or business administration, five years utility accounting experience, some in property record accounting. CPA certificate accepted in lieu of college graduation. 0947.

Superintendent of Utility Accounting—\$7,488-\$8,970 annually. Responsibility for all accounting operations including financial reports, budget forecast, and field reporting for city-owned utilities. Conduct continual review of procedures, devising and installing improved procedures in conformity with FPC and NARUC Uniform System of Accounts. College graduate with specialization in accounting or business administration, six years of utility accounting experience, one year at

supervisory level. CPA certificate accepted in lieu of college degree. 0948.

Manager—to supervise construction, maintenance service and business end of small distribution system. Salary, hospital plan, liberal retirement plan and options to right man. 0950.

Gas Promotion Engineer—engineering degree with at least two years' experience in the industrial, commercial and central house heating, air-conditioning and miscellaneous appliances, covering gas sales, engineering, supervisory installation and service. Must be thoroughly experienced in preparing heating and air-conditioning surveys and selling gas equipment for the promotion of gas sales, on the Northwest gulf coast of Florida. Starting salary \$496-\$598 per month. Maximum age, 35. Send full resume. 0952.

Manager—Service Department—compact gas appliance manufacturer requires at its California facility experienced man, preferably with absorption refrigerator background. Positions also available for service engineers in Los Angeles, Chicago, Detroit, Dayton and New York City. Send resume with experience and salary requirements. 0953.

Supervisor of Plant Records—responsible for all property records, including supervision of maintenance of catalogs for plant and retirement units and general supervision of department. Knowledge of FPC Uniform System of Accounts for both gas and electric, with emphasis on electric. Prefer college graduate with specialty in accounting. Six years' accounting experience, at least two years' supervision. CPA certificate desirable, not required. 0954.

Home Economist—Supervisory vacancy for woman to head modern Kitchen Planning Center. Qualifications are a degree in Home Economics and experience in working with customers and builders in all phases of kitchen and laundry planning. Excellent salary and employee benefits. Submit complete resume of education and experience. Location, Great Lakes area. 0955.

South Jersey Gas' new look unveiled at open house



South Jersey Gas Co., Atlantic City, N. J., recently played host to about 1,200 visitors to its remodeled and refurbished offices and showroom. The new exterior of the building that houses the firm's general and executive offices features porcelain-on-steel panels, black structural glass, and aluminum grilles

White-Rodgers expands

WHITE-RODGERS Co., St. Louis, Mo., automatic controls maker, has acquired those assets of Robinson Tube Manufacturing Co., Conway, Ark., that are incident to the gas burner manufacturing operations of that company.

The manufacture of gas burners formerly carried on by Robinson will be integrated with activities of Configured Tube Products Company, a subsidiary of White-Rodgers.

Gasification bulletin issued

A BULLETIN describing the pilot plant development of a continuous process for the gasification of natural gasoline, naphtha, kerosene, and No. 1 fuel oil has been issued by A. G. A. The objective of the study was to develop a low investment cost process capable of delivering a high heating value fuel gas directly substitutable for natural gas. The title of the bulletin is *Continuous Production of Natural Gas Supplements from Natural Gasoline and Petroleum Distillates in a Tube Furnace*, Bulletin 27. Price is \$5 per copy. Copies may be obtained by writing to Order Department, A. G. A., 420 Lexington Ave., New York 17, N. Y., or to the Institute of Gas Technology, 17 West 34th St., Chicago 16, Ill.

A. G. A. advisory council

E. R. ACKER.....Poughkeepsie, N. Y.
J. B. BALMER.....New York, N. Y.
F. M. BANKS.....Los Angeles, Calif.
F. THOMPSON BROOKS.....Philadelphia, Pa.
D. B. W. BROWN.....New York, N. Y.
F. D. CAMPBELL.....Cambridge, Mass.
SHELDON COLEMAN.....Wichita, Kan.
C. V. COONS.....New York, N. Y.
STUART COOPER.....Wilmington, Del.
R. E. CRAWFORD.....Minneapolis, Minn.
W. M. ELMER.....Owensboro, Ky.
T. H. EVANS.....Pittsburgh, Pa.
L. C. HARVEY.....Syracuse, N. Y.
J. J. HEDRICK.....Chicago, Ill.
H. HANSELL HILLYER.....Savannah, Ga.
H. C. JONES.....Malden, Mass.
D. E. KARN.....Jackson, Mich.
PAUL KAYSER.....El Paso, Texas
JULIUS KLEIN.....Jenkintown, Pa.
D. C. LUCE.....Newark, N. J.
W. G. MAGUIRE.....New York, N. Y.
N. H. MALLON.....Dallas, Texas
C. L. MAY.....Dallas, Texas
D. H. MITCHELL.....Hammond, Ind.
W. E. MUELLER.....Colorado Springs, Colo.
G. T. MULLIN.....Minneapolis, Minn.
STUART NICHOLS.....New York, N. Y.
R. W. OTTO.....St. Louis, Mo.
J. C. PETERSON.....Pittsburgh, Pa.
C. P. RATHER.....Birmingham, Ala.
W. F. ROCKWELL, JR.....Pittsburgh, Pa.
J. GORDON ROSS.....Rochester, N. Y.
E. CARL SORBY.....Kankakee, Ill.
E. H. TOLLEFSON.....New York, N. Y.
G. E. WHITWELL.....Philadelphia, Pa.
D. K. YORATH.....Edmonton, Alta., Canada
C. H. ZACHRY.....Dallas, Texas

PAR COMMITTEE

Chairman—H. A. Eddins, Oklahoma Natural Gas Co., Tulsa, Okla.

General Promotional Planning Committee
Chairman—Frank M. Foster, Southern California Gas Co., Los Angeles, Calif.

General Research Planning Committee
Chairman—Fred W. Batten, Columbia Gas System Service Corp., New York, N. Y.

General Public Information Planning Committee
Chairman—R. J. Rutherford, Worcester Gas Light Co., Worcester, Mass.

FINANCE COMMITTEE

Chairman—E. R. Acker, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.

LABORATORIES MANAGING COMMITTEE

Chairman—William J. Harvey, Public Service Electric and Gas Co., Newark, N. J.

APPROVAL REQUIREMENTS COMMITTEE

Chairman—R. I. Snyder, Southern California Gas Co., Los Angeles, Calif.

Associated organizations

CANADIAN GAS ASSOCIATION

Pres.—R. C. McPherson, Canadian Western Natural Gas Co., Ltd., Calgary, Alberta.

Man. Dir.—W. H. Dalton, 2532 Yonge St., Toronto, Ontario.

GAS APPLIANCE MANUFACTURERS ASSOCIATION

Pres.—Wendell C. Davis, Cribben and Sexton Co., Chicago, Ill.

Man. Dir.—Harold Massey, 60 East 42nd St., New York, N. Y.

FLORIDA-GEORGIA GAS ASSOCIATION

Pres.—John T. Bills, Peoples Gas System of Florida, North Miami, Fla.

Sec.-Tr.—H. H. Phipps, The Houston Corp., St. Petersburg, Fla.

INDIANA GAS ASSOCIATION

Pres.—Carl D. Rees, Northern Indiana Public Service Co., Hammond, Ind.

Sec.-Tr.—R. A. Steele, Citizens Gas & Coke Utility, 2020 N. Meridian St., Indianapolis, Ind.

MARYLAND-DISTRICT OF COLUMBIA UTILITIES ASSOCIATION

Pres.—H. Holmes Vogel, Chesapeake & Potomac Telephone Co., Washington, D. C.

Sec.—Frank J. Little, 320 St. Paul Place, Baltimore, Md.

MICHIGAN GAS ASSOCIATION

Pres.—A. V. Brashear, Michigan Consolidated Gas Co., Detroit, Mich.

Sec.-Tr.—M. G. Kendrick, Michigan Consolidated Gas Co., Detroit, Mich.

MID-WEST GAS ASSOCIATION

Pres.—J. S. Mayer, Northern States Power Co., Minneapolis, Minn.

Sec.-Tr.—James J. Finnegan, 1163 Northwestern Bank Bldg., Minneapolis, Minn.

GAS AND PETROLEUM ASSOCIATION OF ONTARIO

Pres.—J. W. Ostler, Canadian Meter Co., Ltd., Milton, Ontario.

Sec. and Asst. Tr.—H. B. Fry, United Gas Ltd., Hamilton, Ontario.

NEW ENGLAND GAS ASSOCIATION

Pres.—Gilbert J. Williams, The Connecticut Light & Power Co., Berlin, Conn.

Man. Dir.—Clark Belden, 10 Newbury St., Boston, Mass.

NEW JERSEY GAS ASSOCIATION

Pres.—W. Daniel Williams, New Jersey Natural Gas Co., Asbury Park, N. J.

Sec.-Tr.—Ralph E. Martin, New Jersey Natural Gas Co., Asbury Park, N. J.

PACIFIC COAST GAS ASSOCIATION

Pres.—H. G. Dillin, San Diego Gas & Electric Co., San Diego, Calif.

Man. Dir.—Robert D. Scott, 870 Market St., San Francisco, Calif.

PENNSYLVANIA GAS ASSOCIATION

Pres.—E. H. Smoker, The United Gas Improvement Co., Philadelphia, Pa.

Sec.—H. F. Dimmler, Philadelphia Electric Co., Philadelphia, Pa.

PENNSYLVANIA NATURAL GAS MEN'S ASSOCIATION

Pres.—James E. Coleman, The Manufacturers Light & Heat Co., Pittsburgh, Pa.

Sec.-Tr.—P. L. Kesel, Carnegie Natural Gas Co., Pittsburgh, Pa.

ROCKY MOUNTAIN GAS ASSOCIATION

Pres.—Glenn Waddell, Independent Gas Service, Inc., Denver, Colo.

Sec.-Tr.—H. P. Risley, Public Service Company of Colorado, Denver, Colo.

Field Sec.—Roy G. Munroe, Rm. 16, 1300 Glenarm St., Denver, Colo.

SOUTHEASTERN GAS ASSOCIATION

Pres.—T. W. Yarbrough, Piedmont Natural Gas Co., Inc., Greensboro, N. C.

Sec.-Tr.—Edward W. Ruggles, North Carolina State College, Raleigh, N. C.

SOUTHERN GAS ASSOCIATION

Pres.—James A. Wilson, United Gas Corp., Houston, Texas.

Man. Dir.—Robert R. Suttle, 1524 Life of America Building, Dallas, Texas.

WISCONSIN UTILITIES ASSOCIATION

Pres.—Harry I. Miller, Wisconsin Public Service Corp., Milwaukee, Wis.

Man. Dir.—Dale F. Hansman, Empire Building, Suite 522, 710 North Plankinton Ave., Milwaukee, Wis.

INTERNATIONAL GAS UNION

Pres.—Bengt M. Nilsson, Pres. The Swedish Gas Assn., Stockholm, Sweden.

Gen. Sec.—R. H. Touwaide, 4 Ave. Palmerston, Brussels 4, Belgium.

American Gas Association

HEADQUARTERS 420 LEXINGTON AVE., NEW YORK 17, N. Y.
Murray Hill 3-8200

A. G. A. LABORATORIES • 1032 East 62nd Street, Cleveland 3, Ohio • 1425 Grande Vista Avenue, Los Angeles, Calif.
ENdicott 1-0475 ANgeles 1-8161

WASHINGTON OFFICE • 1725 Eye St. N.W., Washington 6, D. C.
Federal 7-6630

Officers

*President WISTER H. LIGON Nashville Gas Co., Nashville, Tenn.
*First Vice-President LESTER T. POTTER Lone Star Gas Co., Dallas, Texas
*Second Vice-President EDWARD H. SMOKER The United Gas Improvement Co., Philadelphia, Pa.
*Treasurer VINCENT T. MILES Long Island Lighting Co., Mineola, N. Y.
Assistant Treasurer JAMES F. DALY Long Island Lighting Co., Mineola, N. Y.
Assistant Treasurer CHARLES J. DUNNE Long Island Lighting Co., Mineola, N. Y.
*Managing Director CHESTER S. STACKPOLE American Gas Association, New York, N. Y.
Secretary JAC A. CUSHMAN American Gas Association, New York, N. Y.

Directors

*Immediate Past President J. THEODORE WOLFE Baltimore Gas and Electric Co., Baltimore, Md.
*ESKIL I. BJORK Chicago, Ill.
EVERETT J. BOOTHBY Washington, D. C.
H. DONALD BORGER Pittsburgh, Pa.
ORVILLE S. CARPENTER Shreveport, La.
MARVIN CHANDLER Aurora, Ill.
CARL E. CLOUD Little Rock, Ark.
WENDELL C. DAVIS Chicago, Ill.
BUELL G. DUNCAN Charlotte, N. C.
*ROBERT E. GINNA Rochester, N. Y.
ELISHA GRAY II St. Joseph, Mich.
CHARLES H. GUEFFROY Portland, Ore.
*WILLIAM G. HAMILTON, JR. Philadelphia, Pa.
WILLIAM J. HARVEY Newark, N. J.
HALL M. HENRY Cambridge, Mass.
JOHN E. HEYKE Brooklyn, N. Y.
*ROBERT A. HORNBY San Francisco, Calif.
ANDREW W. JOHNSTON Boston, Mass.
*OAKAH L. JONES Toronto, Canada
WALTER T. LUCKING Phoenix, Ariz.
RALPH T. McELVENNY Detroit, Mich.
*E. CLYDE McGRAW Houston, Texas
S. LLOYD NEMEYER Milwaukee, Wis.
EDWARD A. NORMAN Columbus, Ohio
*ED PARKES Shreveport, La.
JOHN C. PARROTT Roanoke, Va.
JOHN W. PARTRIDGE Charleston, W. Va.
N. R. SUTHERLAND San Francisco, Calif.
GUSTAV F. WATTERS Syracuse, N. Y.
S. D. WHITEMAN Hastings, Nebr.
*JOHN H. WIMBERLY Houston, Texas

Section Chairmen

Accounting Section C. H. MANN Columbia Gas System Service Corp., New York, N. Y.
General Management Section OTTO W. MANZ, JR. Consolidated Edison Co. of New York, Inc., New York, N. Y.
Industrial and Commercial Gas Section FRED A. KAISER Michigan Consolidated Gas Co., Detroit, Mich.
Operating Section J. T. INNIS Northern Natural Gas Co., Omaha, Nebr.
Residential Gas Section H. WILLIAM DOERING Springfield Gas Light Co., Springfield, Mass.

Association Staff

Managing Director CHESTER S. STACKPOLE
Assistant Managing Director JOHN W. WEST, JR.
Assistant to the Managing Director HAROLD S. WALKER, JR.
Director, A. G. A. Laboratories FRANK E. HODGDON
Manager, Pacific Coast Laboratory W. H. VOGAN
Secretary and Convention Manager JAC A. CUSHMAN
Librarian EDITH W. FINCH
Controller ROBERT J. CUTTING
Secretary, Accounting Section THOMAS J. SHANLEY
Secretary, General Management Section VAUGHAN O'BRIEN
Safety Manager RAUEL N. PAPICH
Secretary, Industrial and Commercial
Section RALBERN H. MURRAY
Secretary, Operating Section J. STANFORD SETCHELL
Home Service Counselor ELLEN BRIDGES
Director, Bureau of Statistics THEODORE I. GRADIN
Director, Utilization Bureau C. GEORGE SEGELER

Director of PAR Plan S. F. WIKSTROM
Director, Promotion and Advertising and
Secretary, Residential Section NORVAL D. JENNINGS
Advertising Manager KENNETH F. MULDOON
Promotion Manager LEONARD M. HAMMER
Manager, Home Bureau GERALD P. MULLINS
Manager, Commercial Promotion HAYES S. WALTER
Director, Research THOMAS LEE ROBEY
Research Consultant DR. N. K. CHANEY
Director, Public Information JAMES M. BEALL
Southern Regional Mgr., Dallas,
Texas RAYMOND B. COOPER
Midwest Regional Mgr., Grosse Pointe, Mich. PAUL INSKEEP
Eastern Regional Mgr., Forest Hills, N. Y. ROBERT N. LAUX
Mgr., Hollywood Bureau H. D. NICHOLSON
Manager, Washington Office CURTIS MORRIS
Utilization Engineer, Washington SEWARD ABBOTT

* EXECUTIVE COMMITTEE OF THE BOARD OF DIRECTORS.

an.
ces
Pa.
Y.
Y.
Y.
Y.
Y.
d
Y.
as.
do
iz.
ch.
es
h.
le
n.
o.
o.
y
z
or.
es
Y.
Y.
b
r
st.
M
S
N
R
S
R
Y
Y
l
R
P
X
N
S
T

NO

Y
Z
O
M
O

O
T

O
O
x